

THE HISTORIC BUILT ENVIRONMENT AND A SENSE OF PLACE
JAGERSFONTEIN: A MINING TOWN IN THE FREE STATE, SOUTH AFRICA



Jagersfontein

**A 60 credit research project submitted
In partial fulfilment of the degree of
Master of Philosophy in
Conservation of the Built Environment**

By

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AUTHOR'S STATEMENT

This 60 credit research project is submitted in partial fulfilment of the degree of Master of Philosophy in Conservation of the Built Environment. The course code of this research project is APG5071S. Work on this paper commenced in and progressed during the period of August 2012 to January 2014.

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ABSTRACT:

The primary purpose of this study is to determine the degree to which the historic built environment plays a role in the establishment of a Sense of Place in the South African context with its diverse population and complex political history. The underlying rationale for this focus is that a strong connection between a Sense of Place and the historic built environment has the potential to translate to a strong motivation for its preservation.

The focus in this research is on a single case, a historic diamond mining town in the Free State Province of South Africa, dating to 1869, with a rich and diverse history.

The research was conducted employing a multi-paradigmatic approach grounded in Phenomenology and Psychometrics. This multi-method approach includes both qualitative and quantitative data. Qualitative data was collected through semi-constructed interviews, background research, surveys and observations. Quantitative data was obtained by means of a simplified 3-point Likert-scale survey as well as quantifiable data obtained during the open-ended semi-structured interviews. These two sets of data form the units of analysis to inform the research question.

The study results indicate a moderate to a strong link between the built historic environment and the Sense of Place of the residents of Jagersfontein. This is despite the fact that the town was originally a Whites-only residential area from which the vast majority of its current residents were excluded on account of racial segregation practices during the pre-1994 Apartheid years.

The study is limited in terms of the results being particular to a specific time and place and on account of the small sample size not being able to be generalised to the entire population of Jagersfontein. The positive link between a Sense of Place and the historic environment, however, is sufficient for the results of this research to form the basis for further research involving the residents of the town in the preservation of the historic built environment.

The practical implication of the study is that it opens the door for development studies in particular that will benefit the economy of the town, as well as the preservation of the historic built environment.

Keywords: Sense of Place; historic built environment; Phenomenology; Psychometrics; South Africa; preservation; community involvement; development studies

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CHAPTER 1: INTRODUCTION

Brief background to the study

Jagersfontein is a small mining town in the western Free State of South Africa, 11 km south-west of the town Fauresmith, the latter being the central hub of the farming community in that area. Jagersfontein owes its existence to the discovery of diamonds in 1869. Purported to be the first place in the world where non-alluvial diamonds were discovered, the town also claims that its open-pit mine is not only bigger than that of Kimberley, but also the steepest hand-dug open-pit mine in the world. Historian Steve Lundersted has researched this claim and found that it was, indeed, the biggest and that Kimberley's Big Hole cannot lay claim to this fame (Van der Merwe, 2005). Although famed for its contribution of two of the world's ten biggest diamonds to date, today Jagersfontein is a relatively unknown and rundown town.

The section of the built environment that forms the focus of this study is situated in the town of Jagersfontein dating from 1869. Jagersfontein has two associated townships, namely Itumeleng and Mosenthalville. The oldest section of Itumeleng, Red Location, is associated with the earliest development of Jagersfontein. Similarly, Mosenthalville contains a section of 12 stands (known as 'The Cape Stands') that dates to approximately 1881 and also forms a part of Jagerfontein's early history. Black residents lived in Red Location and Coloured residents at the Cape Stands. To a large degree this is still the case today, where Itumeleng is mainly a black residential area and Mosenthalville a coloured residential area. However, Jagersfontein, which was originally a Whites-only town, is a mixed-community representative of all the population groups in this region today. A suburb that also falls within Jagersfontein's municipal boundaries is Charlesville, a mine village dating to 1949 that was built exclusively for mine employees. The population distribution for these four residential zones is as follows (Statistics, 2012):

- Jagersfontein (including Mosenthalville)¹ – 1290 (428 households)
- Itumeleng – 3910 (1346 households)
- Charlesville – 490 (156 households)

(Refer to map in Figure 1)

¹ Mosenthalville is a very small township and is for census purposes included with Jagersfontein

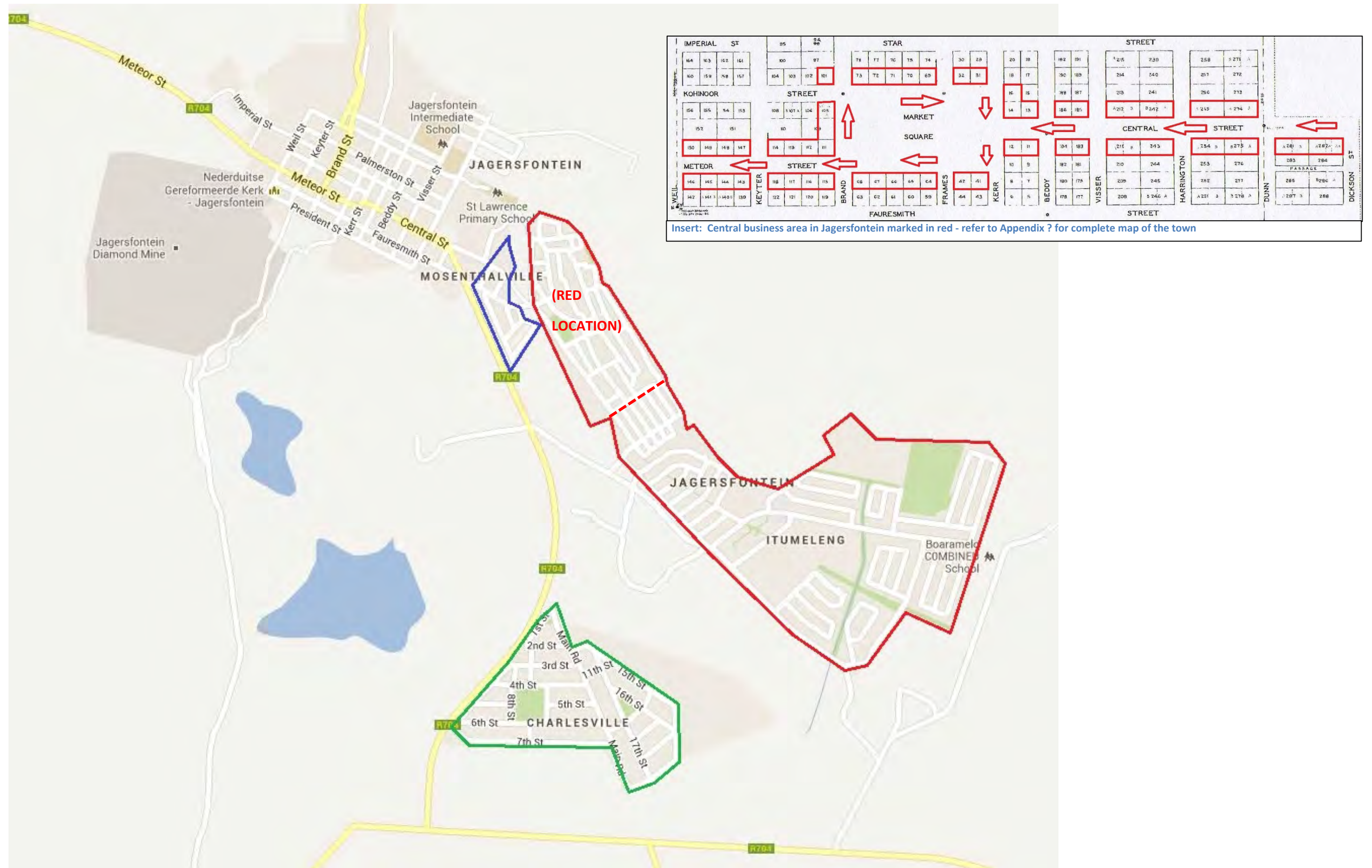


Figure 1: Jagersfontein, Mosenthalville (blue), Itumeleng (red), and Charlesville (green) with insert of central business area of Jagersfontein

The underlying intention of this study is to determine to what degree the historic built environment or townscape contributes to a Sense of Place, not only for those living in Jagersfontein, but also those in the two townships of Itumeleng and Mosenthalville. Due to time constraints, the inquiry focuses only on the central business section of Jagersfontein. All population groups would have interacted with this part of town over the years and will feature in a Sense of Place.

Rationale

At the 2010-conference on “Spaces of History/Histories of Space” at the University of California, Berkeley, participants made varied contributions towards new approaches to studying the built environment, with specific reference to its historic elements. In his paper, *“History of Spaces as a Pivotal Tool for the Planning Practice”*, Giovanni Allegratti referred to a process of *“dialogical planning”* which the Municipality of Dicomano (Italy) had initiated to *“create and develop a dialogue between inhabitants and institutions”* in order to discuss the process of transformation of the city (Allegratti, 2010). Although the situation in Dicomano differs vastly from that of Jagersfontein, the point taken is the importance of involving the local public in any planning or evaluation process.

Similarly Klosek-Kozłowska (2002: 87) also points out that the evaluation of town space by town-planners and conservators is not meaningful without the involvement of the people who live there, and the articulation of socially significant values of a particular area.

Determining the factors that play a role in the establishment of a Sense of Place must, of course, include some way of uncovering those aspects of the environment which are of value to the local residents. This process would also provide indications of the role the historic built environment plays in the establishment of a Sense of Place.

This study ties in with current research, Graham et al. (2009) in particular, focused on determining the role historic environments play in the establishment of Sense of Place .

The rationale behind this research is the assumption that a strong relationship between a Sense of Place, and consequently also place attachment/dependency/identity, of people and the historic built environment of the town could translate to a strong social motivation for preservation and conservation of these areas. This in turn would or should influence

planning decisions for regeneration of the town (Bradley et al., 2009).

Studies with the exclusive aim of finding a link between Sense of Place and the historic built environment have, to date, not been done in South Africa. In addition to this, existing research of this nature is focused on towns/cities situated in western countries with less divergent ethnic compositions and less turbulent political backgrounds than found in the South African context. With few exceptions, the historic environment of towns and cities in South Africa are linked to a history largely restricted to the white population and/or are areas from which people of colour have been removed. The challenge, thus, is to see if the historic built environment plays a significant role in the establishment of a Sense of Place with all ethnic groups in South Africa; especially with those that did not, historically, have direct links with this environment or might have negative connotations attached to it.

The Site of the Study

As already indicated, the focus will be on a specific part of Jagersfontein, namely the central area of the town where the businesses and banks are situated. None of the other residential areas has commercial, business, retail, etc., areas, with the exception of a few *spaza*² shops and *shebeens*³. The central area is, therefore, an area used by all inhabitants of all residential areas and it is important to include the views of people from the associated townships as well.

Research Foundation

Research on Sense of Place can be found in a variety of different disciplines and consequently a variety of underlying paradigms. The approach largely depends on the worldview of the researcher as each methodological approach depends on its ontological and epistemological underpinning. The principal method employed in this research is a phenomenological interpretation of Sense of Place within the setting (Place) mainly based on the idea of *genius loci* as postulated by Norberg-Schulz (1976) and Lynch's (1960) concept of the legibility of the town as framework for every-day experience. Although both

² *Spaza* shops found its origin in sprawling townships in South Africa where there are no formal shopping centres in its immediate vicinity. These businesses are usually home-based and sell everyday convenience items such as maize meal, soap, condiments, cigarettes, tobacco, and a limited range of tinned foods.

³ Similar to *spaza* shops *shebeens* are also found in black townships and originally sold only traditional home-brewed beer but nowadays can sell a variety of other alcoholic beverages as well. Many of these are also home-based industries.

Norberg-Schulz and Lynch's work are connected to existential phenomenology, it still forms a good basis for the hermeneutic principles employed in this study.

Norberg-Schulz (1980: 5) describes the *genius loci* as “*the basic relationship between man and his environment*”. He calls this relationship the existential dimension of architecture which, he argues, requires a qualitative and phenomenological understanding of architecture, as opposed to the mostly quantitative focus of scientific inquiry that dominated earlier architectural research. Place is, therefore, more than just a collection of concrete phenomena but includes intangible aspects (such as memories and emotions) to render it a total phenomenon of both tangible and intangible aspects. Each component is indivisible from the whole which means that changes in one will also affect the meaning of other components (Norberg-Schulz, 1980: 168). In this, man stands in a reciprocal relationship with the environment where each influences the other (Norberg-Schulz, 1980: 52).

Lynch (1960: 5) points out the impact the legibility of a town has on every-day experience. Places with clearly navigational beacons (e.g. identifiable landmarks and easily recognizable pathway patterns) create a greater sense of security in the sense that people are better able to orientate themselves. Norberg-Schulz (1980: 52) similarly comments “*man dwells when he can orientate himself within and identify himself with an environment...*”

A focus on the legibility of a town provides an opportunity to record the spatial attributes of how people use and view their towns, whereas a focus on the *genius loci* provides an opportunity to obtain thick descriptions for the meanings attached to specific areas. Both of these methods have been used to determine Sense of Place, e.g. the approaches of Tuan (1975); Relph (1976); Violich (1985); Williams & Stewart (1998) & Seamon (1984), and can be viewed as complementary rather than opposing approaches.

The second approach based on psychometrics is not only employed for triangulation of the research results of the aforementioned approach (Bott and Banning, 2008; Williams and Vaske, 2003), but also for the two approaches to clarify and enrich each other (Patterson and Williams, 2002: 375).

Problem Statement

It is my intention to analyse and evaluate the factors that lead to a Sense of Place among the inhabitants of Jagersfontein and ascertain if, and to what degree, the historic environment plays a role in this.

Identification of Key Question and Sub-Questions

At the core of this study is the interaction between the historic environment (built environment, streetscapes, public spaces historically used for particular purposes, and manmade landscapes) and people, and the influence they have on each other in shaping form, meaning and identity. The key question, therefore, is:

Does the historic environment make a significant contribution to a Sense of Place for the current population of Jagersfontein?

The term Sense of Place, however, is a multi-dimensional concept which requires breaking down into smaller defined units to focus the study. For this, one must look at the nature of both Place and Sense of Place.

According to Gieryn (2000: 464-465), Place has three defining features: (1) a geographic location with (2) a material form which is (3) imbued with meaning and value. Sense of Place has various different interpretations, but central to all is the affective relationship humans have with a specific environment (Norberg-Schulz, 1976; Relph, 1976; Williams et al., 1992; Semken and Freeman, Nov., 2008; Bradley et al., 2009; Najafi and Shariff, 2011), i.e. it directly links with the third defining feature of Place. Just as the defining features of Place should not be separated (Gieryn, 2000: 467), a study of Sense of Place should also include the geographic location and material form of Place.

The sub-questions aim to address the following dimensions of Sense of Place in relation to the historic environment: biophysical setting (the natural and manmade structures of Place), psychological (identity, dependency, personal attachment, satisfaction), sociocultural (social capital, cultural influences), and political/economic dimensions.

- Distinctiveness: Which distinctive features can be identified as providing meaning to Place and, as such, contributes to stronger Place Attachment ties with the respondents?

- Location: Does distance from the historic node play a part in the strength of residents' attachment to this area?
- Identification: Which aspects of the physical environment have an impact on the residents' self-identity and consequently their Sense of Place?
- Continuity: Are there indications that people view the historic environment as a continuity or extension of the self?
- Dependency: Which aspects of the environment do residents depend on to serve in their needs?
- Rootedness: Do people who have lived for a longer period in Jagersfontein and associated townships have a stronger identification with the town than those who have been there for shorter periods?
- Quality of the environment: What effect does the perceived quality of the environment have on the residents' Sense of Place?
- Social aspects: What role do aspects such as gender, age, crime, family ties, and ethnic groups play in the residents' establishment of a Sense of Place?
- Social capital: Is there a discernable link between the health of people's social capital and their sense of belonging to a particular area?
- Political/Economic: Do political and economic aspects have an influence on people's identification with their environment?

Approach and Brief Chapter Outline

The framework for this research is informed by the literature review in **Chapter 2**. The sources consulted are listed and discussed in terms of their applicability to the research focus. Current research and main arguments on the relationship between the historic environment and Sense of Place, as well as Place Attachment, within different disciplines and paradigms are examined, analysed and compared for creating reliable methods for data collection in this particular case study.

Chapter 3 outlines the underlying methodology of the research with specific reference to phenomenology and psychometrics and its different approaches to the study of Place. Within these paradigms, the various constructs of both Sense of Place and Place Attachment are explained and defined where necessary. The interview methods employed to conduct

this study are also clarified. Both qualitative and quantitative methods are explained in terms of the objectives of each subset of the research. This research project is essentially a social sciences undertaking and data will mainly rely on observed behaviour, interview material, and the results of open- and close-format questionnaires.

Chapter 4 addresses the Place component of this study. The aim with this chapter is to form a 'visual' text of the life-world of the town's residents in terms of its natural and manmade features that lend it a particular character. A broad historical background to the subject area is compiled from data collected from various sources, included, but not limited to, archives, newspapers, historical résumés, biographies, old photographs, old maps, survey diagrams, academic journals and yearbooks. Physical traces of the town's history serve as time markers to determine if the town can be linked to a specific period in terms of its appearance. This serves as background for an analysis of the current manmade landscape in terms of its texture and grain, and the legibility of this landscape that provide a particular atmosphere, its *genius loci*.

In **Chapter 5** Sense of Place is investigated through qualitative inquiry that involves in-depth interviews, as well as casual observations. The information collected is analysed by means of a multi-disciplinary approach to ensure a comprehensive understanding of the individual's life-world is obtained. The results are interpreted in terms of the strength of Sense of Place, as well as the degree to which the historic built environment features in the establishment of Sense of Place.

In **Chapter 6** Sense of Place is investigated through quantitative inquiry of data obtained by means of quantifiable data collected during the interviews of the open-ended questionnaire used for the qualitative inquiry, as well as short close-ended questionnaires that were filled out by the same interviewees. The focus in this chapter is on one defining aspect of Sense of Place namely Place Attachment. The aim with this multi-methodological approach is to determine if the two sets of data correlate in terms of its findings for the measure of Sense of Place. It also aims to obtain a deeper understanding of the phenomenon under investigation than what might be achieved by using only one of the two methods.

Chapter 7 starts with a brief restatement of the research questions and the purpose of the study. This is followed by a synthesis of the empirical findings with respect to each

individual research question. The results are further compared to current research in this field and highlighted where it confirm, or negate, general hypotheses regarding the role the historic built environment plays in the establishment of a Sense of Place, or present new theories. Broader implications of the results are identified and reported.

Recommendations are made for further research building on the current results, as well as for further research to fill in any identified gaps in our understanding of the problem with specific reference to the situation in South Africa. Limitations of the study and its potential influence on the results are highlighted before concluding with a short statement on the importance of the research as identified via the results.

CHAPTER 2: LITERATURE REVIEW

Introduction

This research originated in a growing concern for the rapid decline of the historic built environment of a small Free State mining town. An initial search for available literature on conservation of the built environment confirmed my own notion that if a town's residents view their historic buildings, or a particular area, as part of what constitutes 'home' to them, i.e. contributes to their Sense of Place, there is a greater probability of these buildings being preserved for future generations. The research focus, therefore, shifted from conservation to determining the degree of affinity this town's people have with their built environment. A particular focus is on factors that have a negative and/or positive influence on this affinitive relationship. The purpose for this research, therefore, is determining the role the historic environment in Jagersfontein plays in its inhabitants' Sense of Place.

The term Sense of Place, however, turned out to be a very fuzzy concept which prompted several scholars to focus their publications on obtaining some clarification in this regard alone (Abbate, 2007; Davis, 2011; Deutsch et al., 2011; Farnum et al., 2005; Jivén and Larkham, 2003; Jorgensen and Stedman, 2001; Kyle and Chick, 2007; Larson et al., 2013; MacDonald-Carlson, 2003; Najafi and Shariff, 2011; Relph, 2009; Stedman, 2003; Williams and Stewart, 1998). Closely linked to this is the term Place Attachment and central to both the concept of Place.

The pilot literature search clearly pointed out that different disciplines attach different meanings to similar concepts. This chapter will not deal with literature on method and methodology as that is described in detail in Chapter 3. However, it is necessary to point out that this research is based on a multi-disciplinary approach which requires clarification of terms as they will be used in this paper.

The origin of Sense of Place

Although a buzz word that seems to have gained increasing popularity over the past forty years and specifically since the 1990s, the term Sense of Place is not new. Sense of Place has its origin in *Genius Loci* that in classical Roman religion referred to a protective guardian spirit but in Western usage refers to a location's distinctive atmosphere, the spirit of a place.

In architecture we find one of its earliest uses in landscape architecture where 18th century English poet Alexander Pope (1688-1744) says the following:

*“Consult the genius of the place in all;
That tells the waters or to rise, or fall;
Or helps th’ ambitious hill the heav’ns to scale,
Or scoops in circling theatres the vale;
Calls in the country, catches opening glades,
Joins willing woods, and varies shades from shades,
Now breaks, or now directs, th’ intending lines;
Paints as you plant, and as you work, designs.”*

[Epistle IV, to Richard Boyle, Earl of Burlington] (Pope and Homer, 1903)

Jumping to the 20th century, we find *Genius Loci* firmly entrenched in the work of Christian Norberg-Schulz who states that his own work was greatly influenced by the work of the German philosopher Martin Heidegger (1889-1976). Norberg-Schulz describes his earlier work, *Intentions in Architecture*, as taking a more scientific approach to the study of architecture and, though he doesn’t consider this to be a wrong approach, he advocates that in doing so the very essence of the character of Place is not acknowledged. He attempted to rectify this in his following work *Existence, Space and Architecture* where he introduced the concept of “*existential space*”, the basic relationship between man and his environment. His book on *Genius Loci* is an attempt to advocate a more qualitative and phenomenological approach to the study of places, acknowledging the reciprocal relationship between place and man that cannot adequately be captured by means of scientific analysis alone (Norberg-Schulz, 1980: 5).

Characteristics of Sense of Place

Due to the multi-disciplinary use of the term Sense of Place, it would be more constructive to identify the different characteristics of it than locating an over-arching definition of the term that would be equally applicable to all.

Williams & Stewart (1998: 19) analyse the use of Sense of Place in different disciplines and

come to the conclusion that “...for most people [it] refers to the rich and varied meanings of places and emphasizes people’s tendency to form strong emotional bonds with places”. Sense of Place, however, is more than just the tendency to form strong emotional bonds with places; to the individual it is very personal in nature, and a strong presence can have a positive impact on a person’s wellbeing in general. Adversely, the absence can create a feeling of loneliness and isolation within the individual. Massey (1991) confirms this by pointing out that a very important characteristic of Sense of Place is that it is personal in nature. She argues that in one community, despite the strength of the bond between its members, a Sense of Place would differ between individuals and, as an example of this, refers to the difference between how men and women would experience a mining town.

Jorgensen and Stedman (2006: 316-317) adequately describe the comprehensive nature of Sense of Place as “...a multidimensional construct representing beliefs, emotions and behavioural commitments concerning a particular geographic setting”. The concept of Sense of Place is, accordingly, delineated as Place Identity (place-specific beliefs), Place Attachment (the emotive value), and Place Dependence (behavioural commitments). Stedman (2003: 672) adds a fourth component to this, Place Satisfaction (attitudes about quality of service delivery).

These four elements form the essence of the life-world of a person and form a comprehensive basis for interrogation of a Sense of Place. It is of particular importance to view each as part of the whole rather than individual self-sustained units. Influences in one sphere is bound to affect the relationship in other spheres that render the concept of Sense of Place as actively-created rather than a static state of mind.

Relph (2009: 25) distinguishes between Spirit of Place and Sense of Place as the former primarily residing outside a person, i.e. it can be experienced without necessarily having a lasting impact on a person, and the latter inside a person as part of the lived experience and, as such, not something that can be enhanced or diminished by a new design of the environment. This view of Spirit of Place is in line with what Norberg-Schulz (1980: 23) describes as the *Genius Loci*, the character that is concretized in its three-dimensional form.

Hay (1998: 9-16) distinguishes between five different levels in the residential context of

Sense of Place (superficial, partial, personal, ancestral and cultural) which, in turn, would have an effect on the strength of the bond people have with places. At a superficial level, it refers to visitors who stay for only a short while; whereas, at a partial level it refers to returning holidaymakers who, perhaps, own a holiday cottage and return at regular intervals. At a personal level, it can refer to both new residents and those who have lived there for a longer period, but with no prior connections to the area. 'Ancestral' refers to those residents who both live there *and* have had ancestors living there as well; whereas, the last category, 'cultural', adds to this the dimension of a spiritual connection as affirmed by culture.

In summary, it can be concluded that Sense of Place is personal in nature and, therefore, an internal construct. It can be broken down into individual concepts such as Place Attachment, Place Identity, Place Dependence, and Place Satisfaction, where the whole is greater than the sum of its individual components. Social aspects such as gender, age, family ties, and cultural background can have an effect on the individual's Sense of Place and, lastly, length of stay can have an effect on the level of intensity of the emotional experience.

Characteristics of Place Attachment

Although sometimes viewed as a sub-construct of Sense of Place, the term Place Attachment is often used in a similar manner as Sense of Place and at other times to have a completely different meaning and, thus, requires further attention.

Williams et al. (1992: 31) point out two primary conceptualisations of Place Attachment within the field of environmental psychology; Place Dependency as quoted from Stokols (1981) that views Place Attachment in terms of the degree to which it serves in a person's needs; and Place Identity (as quoted from Proshansky (1978)) as an extension of a person's self-identity.

Scannell and Gifford (2010) view Place Attachment as consisting of three interrelated dimensions namely, personal, psychological and place, or more aptly the 'who', 'how', and 'what' of Place Attachment. The suggested tripartite model of place attachment (2010: 2) is useful in leaving room for a multitude of applications depending on the research goal. At a

personal level it provides room for both individual and group influences; place includes its physical and social construct; and the psychological level includes a wide range of cognitive processes. Whereas it is often argued that Sense of Place focuses more specifically on the affective bond with a specific place (Williams et al., 1992: 31) or, as called in this paper, 'psychological level', this model more clearly brings together the interdependency of these three legs in determining the level of both Place Attachment and Sense of Place.

Connecting Sense of Place with the historical environment

Lynch (1972: 41) provides the link between personal psychological value and the historic environment, and that removal of a valued historic physical environment can cause a sense of being uprooted. At the same time, however, he also points out that some physical remains of the past might have a negative impact on well-being if it is connected to some wrong-doings of the past (1972: 37).

Specific concepts such as Place Distinctiveness, Place Continuity, and Place Dependence are frequently found in research linking Sense of Place with the historic environment (Graham et al., 2009: 3).

Twigger-Ross and Uzzell (1996: 207) examine both distinctiveness and continuity, as identity principles, in relation to the residential environment. Place Distinctiveness plays on man's inherent desire to be distinctly different from others. Sense of Place can be enhanced through perceived distinct features of a place that instils a sense of pride in living there. As such, the environment becomes an extension of the person's self-identity which is often reflected in their life-style.

Place Continuity also serves a role in the maintenance of self-identity through specific environments representing physical reminders of a person's past (Twigger-Ross and Uzzell, 1996: 207). This is of particular importance to elderly people who have spent a long time in one environment. Disruptions to continuity in the physical environment can illicit strong feelings such as grief and have a profound effect on a person's Sense of Place (Twigger-Ross and Uzzell, 1996: 208).

Gustafson (2001: 9) links 'continuity' with 'roots' which indicates a firm entrenchment in an area. People often explain their reason for not wishing to live elsewhere as 'my roots lie

here' which is indicative of a very strong Place Identity and, consequently, Place Attachment.

Conclusion

The aim with this chapter was to provide the broad context within which the research is situated and is, as such, not an exhaustive list of all the literature reviewed. To avoid duplication, literature sources that have particular relevance to the research are cited and explained in the context in which they are used in the body of this paper.

CHAPTER 3: APPROACH OF THE INQUIRY AND ITS METHODOLOGY

Case Study

This research rests on results obtained via a multi-method approach, including both qualitative and quantitative data, grounded in two multi-disciplinary methodological approaches focused on a single case study. In this the case study is regarded as neither the method, nor the methodology, but a heuristic device that serves to focus the study as defined by VanWynsberghe (2007: 80):

“...case study is a transparadigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process, etc.).”

The phenomena for which data are collected in this research are two terms, Sense of Place and Place Attachment. These two terms essentially have the same root meaning, but, depending on the research approach at both the paradigmatic and research program level, can have different foci as will be seen in the following discussions.

Discussion of Methodological Approach

The philosophical assumptions underlying this research are explained by taking a closer look at the two terms that form the core of the research. Sense of Place and Place Attachment, as used in this research, are at its core terms linked to the research of Place situated in two different paradigms, namely: those relying on qualitative data such as Phenomenology for research on Sense of Place; and those relying on quantifiable data such as Psychometrics for research on Place Attachment.

Even though these two terms are often used interchangeably, they are not exactly the same (Wells, 2009: 39). Patterson and Williams (2005: 367) warn that the inconsistent or interchangeable use of terminology within a single research program can lead to confusion in communication of the research results. Williams and Stewart (1998: 19) also point out that several writers use these terms to describe concepts that are similar, but not identical.

At its most basic level, however, both refer to the affective relationship humans have with a particular environment (Norberg-Schulz, 1976; Relph, 1976; Williams et al., 1992; Semken

and Freeman, Nov., 2008; Bradley et al., 2009; Najafi and Shariff, 2011).

The difference between the two, however, lies in the focus of intention of each. Wells (2009: 39) describes the difference between the two concepts as follows:

“In its most basic form, sense of place is a general, holistic, qualitative assessment of the affective capacity of an environment while place attachment attempts to provide discrete dimensions of meaning, typically in a measurable or quantifiable manner.”

Riley (1992: 13) refers to Place Attachment/Sense of Place as a subject matter and not a discipline and is it, therefore, inherently interdisciplinary. Since several different disciplines can share the same paradigm, it should be pointed out that this particular study is not only multi-disciplinary, but also multi-paradigmatic for reasons as discussed below.

Integrating two different paradigms in one research goal requires a pluralistic worldview where place research is not viewed as a single research tradition, but rather as a trans-disciplinary *and* trans-paradigmatic domain (Patterson and Williams, 2005: 373). The aim with this current research, however, is not so much integration of two paradigms but using each to clarify and enrich the other where no specific one is the ultimate goal. Patterson & Williams (2002:81) view such an approach as reflecting the critical pluralist view rather than just a pluralist view.

Theoretical Foundations

Developing and testing theoretical concepts within a research program are guided by the interdependent normative philosophical commitments (epistemology, ontology and axiology) of the particular paradigm that underlies the research (Patterson and Williams, 2005: 375). The most basic differences in the normative commitments between Psychometrics and Phenomenology can be found in their ontology. Psychometrics can be either telic (end state) or autotelic (process-oriented). As the focus in this study is on the social-cultural angle, it is process-oriented. Phenomenology is focused on intentionality⁴ with the emphasis on the indivisibility of the person-world relationship. This, in turn, affects

⁴‘Intentionality’ is used here in its meaning as a phenomenological term that refers to the notion that consciousness is always the consciousness of something (Jacob, 2010).

the sources of investigation, as opposed to in Psychometrics, as used in this paper, where the focus is on the nature or meaning of experience as the basis for understanding behaviour.

Two different methods of inquiry are used for the qualitative and quantitative components of this research and form the basis of the mixed-methods approach. Qualitative data is collected using phenomenological research which, in this paper, is a strategy of inquiry focused on the identification of the essence of personal experiences of Sense of Place as described by the interviewees (Creswell, 2009). Quantitative data are obtained by means of survey research using questionnaires for data collection on Sense of Place. (Creswell, 2009).

Qualitative Approach

Patterson and Williams (2002: 1-2) warn that for a qualitative study in science to be more than just a weak repetition of results that could be obtained via a more traditional quantitative approach, it requires clear communication of the underlying philosophy and principles that guide the particular qualitative approach. In this, a qualitative approach is viewed as referring to the *“nature of the data that serves as the initial basis for analysis”*. In short, these are types of data that cannot sufficiently be represented by numerical measures which is principally of importance in cases where:

- the phenomenon being investigated is characterized by a high degree of ambiguity;
- when a more holistic rather than multivariate understanding is needed;
- where the focus is not on an end-result that could be used to generalise a sample to a population, but rather a more in-depth understanding of a specific phenomenon.

The main difference between existing research on the role of the historic environment in the establishment of a Sense of Place (which originates mainly from western countries) and the current research, is the composition of the research population on which it is focused. In this research, the attempt is to explain the Sense of Place of people from a very heterogeneous and complex society. The aim, therefore, is to gain an understanding of which factors play a role in the establishment of a Sense of Place with different groups in one specific town, and to which degree the historic environment features in this across all groups, rather than to generalise the findings of the sample across the entire population of the town.

On account of the complexity of the research sample, an interpretive paradigm such as hermeneutical phenomenology underpins this qualitative research process. Although this research is, to a degree, motivated by the hypothesis that the historical environment *does* play a role in the establishment of a Sense of Place as found in Bradley et al. (2009: 2), the research is not based on hypothesis testing, but is rather inquiry-guided.

It should, however, also be pointed out that the hermeneutical tradition refers to a family of interpretive methods where each approach has its origin in different philosophies that, in turn, would influence the nature of the analysis. The four commonly recognized approaches are (Patterson and Williams, 2002: 12) :

- hermeneutic divination, associated with the philosophies of Schleiermacher, with the main characteristic that interpretation is achieved through divination;
- hermeneutic re-enactment or reproductive hermeneutics, associated with the philosophies of Dilthey, where understanding is obtained through an empathic process that includes bracketing preconceptions and placing yourself in the interviewee's position. This version is also closely related to existential phenomenology;
- hermeneutic reconstructionism/critical hermeneutics is associated with the philosophies of Apel and Habermas, where understanding is achieved through re-enactment of the interviewee's meaning or experience;
- productive/projective hermeneutics is closely related to the philosophies of Gadamer, Ricoeur, and Heidegger (although the latter is also associated with hermeneutic re-enactment). The main points of difference from the aforementioned three approaches are the recognition that the interpreter (or interviewer) plays an active role in the interpretation of texts, that bracketing is therefore impossible, and that no-one can truly empathize with another's experience.

The research in this paper is based on productive hermeneutics with its normative commitments as follows:

Ontological commitments

The nature of reality is constructivist rather than objectivist in which it is viewed that humans play an active role in constructing (their own) reality, knowledge and identities and, as such, there can be multiple realities that vary across time, cultures, and individuals (Patterson and Williams, 2002: 14). In the words of 18th century philosopher Giambattista Vico “*verum esse ipsum factum*” (the truth is precisely what is made). The basic unit of analysis is, therefore, not information, but meaning as holistic units, where the whole is viewed larger than the sum total of its individual parts (Patterson and Williams, 2005: 370-371) .

The nature of human experience is a narrative comprising of a thread of smaller narratives, local and personal in nature, which is constantly forming and changing and, therefore, always under construction; as opposed to deterministic that has a predictable outcome based on isolatable variables. This is best expressed by Heidegger’s *ready-to-hand mode* of engagement, which is associated with personal activities where the object obtains meaning through the action (Heidegger, 2000: 98).

Human nature is viewed as individuals actively engaged in the process of constructing meaning (meaning-based models of human nature) as opposed to the processing of information that exists in the environment proposed by information-based models of human nature.

Epistemological commitments

These commitments explain how we know what we know and define the role of interpretation in science, the relationship of the observer to the phenomenon being observed, the type of knowledge generated, and the research process (Patterson and Williams, 1998: 288).

The role of interpretation in science:

Hermeneutic epistemology rejects the notion that unbiased observation and interpretation

is possible and proposes that all observation rests on interpretation, i.e. researchers interpret observation against their own background and knowledge, consciously and subconsciously (Patterson and Williams, 2002: 18).

Gadamer (1983: 27, 40) views interpretive observation as the fusion of two horizons being that of the researcher and that of the author of the “text”. Text, in modern Hermeneutics, is at the same time an image, a linguistic construct, and an information structure, i.e. anything that can be interpreted which would include the entire life-world of the human being (e.g. interview, written text, building, painting and so forth). Heidegger (2000: 143) refers to the researcher’s horizon as the “forestructure of understanding”, i.e. we understand in terms of that which we already know.

Relationship of Observer to Phenomena being observed:

In hermeneutics the role of researcher bias is used positively as enabling prejudices (i.e. prior conceptions based on comparable experiences) that, together, form the framework on which knowledge is built (Patterson and Williams, 2005: 23). The result is a dynamic dialogue between the researcher’s prejudices and what he or she seeks to understand, where the ultimate aim is to gain new insight and not merely to prove or discount previous hypotheses (Patterson and Williams, 2005: 24). The researcher, therefore, plays an active role in the production of data and data-strategies, such as in-depth interviews, which places the researcher in a better position to take advantage of this role (Patterson and Williams, 2005: 25).

Type of knowledge generated:

Despite the research being based on generalities, i.e. the aforementioned “enabling prejudices”, hermeneutical research focuses on individual cases with no *a priori* assumption that generalities between the individual cases might exist. It differs from absolute relativism in that nomothetic level insights are viewed as potentially attainable. It always begins with an idiographic level analysis and, only if evidence from the individual cases emerges for the possibility of aggregation across individuals, it would move on to obtain a nomothetic level of insight. (Patterson and Williams, 2005: 26)

Research Process:

Hermeneutic research is a cyclic process with no definite end-point. Research findings derived from this process would, therefore, only be representative of the researcher's point of view at a specific moment in time, while the dialectic process remains open for further inquiry.

The research cycle starts off at the idiographic level where preconceptions about the whole (the researcher's "forestructure of understanding" as postulated by Heidegger) are initially relied on for an understanding of the individual parts which form part of a larger whole. The understanding arrived at of the individual parts may change the original anticipated meaning of the whole, which, in turn, then influences the interpretation of the individual parts. At the same time, there is also a constant to-and-fro dialogue between the enabling prejudices and the phenomenon the researcher is trying to understand.

Data analysis, therefore, starts from the moment the first data is collected so that *"emergent themes can be identified and used to guide further research"* (Patterson and Williams, 2005: 27). All subsequent individual sets of data (e.g. a single interview) will be treated in the same way and, as new themes are identified, earlier collected data will be revisited and re-analysed.

The researcher's understanding of the whole has to be continuously revised in view of the reinterpretation of the parts.

Axiological commitments

Axiological commitments focus on the underlying goals of a particular approach to science and can be classed as terminal and instrumental goals. The terminal goal, in its broadest form, is to reach an understanding. What is understood by *understanding* is, however, closely related to the epistemological assumptions of a particular research tradition. Patterson and Williams (2002: 29) explain the terminal goal in hermeneutics as *"for the researcher to provide a better understanding of the nature and meaning of human experience in context, independent of the ability to wholly predict or control outcome"* (own emphasis).

Instrumental goals, on the other hand, refer to the criteria by which any research tradition's

specific applications are evaluated. Although the criteria for evaluation (credibility, dependability of measure, transferability and confirmability) are universal across all sciences, there can be differences in approach to each criterion at the paradigmatic level. Thompson (1990: 29) discusses the two broad approaches in evaluating interpretive research, namely foundationalist and anti-foundationalist as follows:

“Foundationalism is described as a dualistically motivated epistemology seeking to ground knowledge on a firm, indubitable base. In accepting the subject-object distinction, positivist and humanist methods reveal a foundationalist logic. Anti-foundationalist approaches have a more ontological focus in seeking to describe understanding without dualistic categories. The critical relativist program is the major example of this approach in consumer research.”

Hermeneutic phenomenology is anti-foundationalist in that it proposes that the interpretation of the research results cannot stand on its own but should be read in conjunction with the actual research. In view of this, it seeks to define evaluative criteria related to the research result(s) instead of the research procedures. The over-arching criteria here are identified as persuasiveness, insightfulness, and practical utility (Patterson and Williams, 2002: 32-33).

As the hermeneutic ontology does not acknowledge the existence of an absolute overarching truth, but rather, different realities depending on the person and their situation at a given point in time, success is measured in terms of the degree to which the researcher can persuade the reader of his or her interpretation in terms of the articulated viewpoint (Patterson and Williams, 2002: 35).

Insight is obtained when the researcher has managed to increase the reader's understanding of a particular phenomenon by presenting the qualitative data as a logical unit of interrelated components, instead of seemingly disparate pieces of data. To achieve this requires an interpretive approach, rather than a mere description of data, which connects all the different units into a coherent whole.

Hermeneutic research is, as mentioned, not aimed at finding absolute truth but more of a problem-solving nature. It aims to uncover possible answers to a specific problem at a given

time and place, and is deemed to be of practical use if it has achieved this goal. More specifically, it aims to foster an understanding of a specific phenomenon which could form the basis for finding a solution to a particular problem. In other words, the current research should uncover issues relevant to a Sense of Place that are related to the built environment in general and, possibly, the historic environment in particular, among various different people of the local population of Jagersfontein, that could be put to practical use, e.g. for future town planning development, recreational development, tourism development, local management, conservation, and so forth.

Method of Inquiry

The method of inquiry, as set out below, is guided by the principles of the normative commitments of hermeneutic phenomenology as previously explained.

This research is motivated by personal concern for the poor condition of the historic environment of Jagersfontein. My initial involvement in Jagersfontein was not related to its built environment, but instead, to heritage aspects related to the town's mining history. From the onset, though, I have determined that the mining components cannot be divorced from the town since it was as a consequence of mining activities that the town was established. As my previous research was contract-based, I was forced to focus only on the mining aspects while my interest in the town itself had to be suspended for a later date.

In 2011 I was appointed as a member of the permit committee of Free State Provincial Heritage Authority (FSPHRA), which placed me in a position to become more directly involved in the built environment of Jagersfontein town. I was now actively seeking for ways to preserve the historic features of Jagersfontein. An extensive literature search on research relating to the historic environment brought two aspects to my attention, namely:

- successful negotiations regarding preservation of the built environment should start at community level (Allegretti, 2010; Klosek-Kozłowska, 2002; Manzo and Perkins, 2006; Raymond et al., 2010); and
- the role the environment plays in people's Sense of Place (Bott et al., 2003; Brown et al., 2003; Buttner, 1976; Gosling and Williams, 2010; Graham et al., 2009; Inalhan and Finch, 2004; Kyle and Chick, 2007; Lewicka, 2011; Manzo, 2003; Stedman, 2003) which, in turn, would influence the first point.

Concentrating on research dedicated to finding the link between Sense of Place and the historic environment (Bradley et al., 2009; Wells, 2009) provided the base for the fore-structure of my understanding upon which my own research would be built. From this, I realised that the historic environment is but one aspect of an integrated whole, and that focus on a single aspect would not provide a meaningful understanding of a very complex concept. Relinquishing the singular focus on the historic environment and turning it onto the overarching concept of Sense of Place, I returned to the literature to find specific broader themes in terms of Sense of Place that could guide the research process. From this emerged three broad themes, namely the geographical location, the physical character of the environment and the sociological dimension of Sense of Place. This, in turn, encompasses more specific guidelines such as the distinctiveness of place, continuity of the built environment, dependency on the environment as a whole, rootedness in a place, location and social aspects such as insideness and outsideness as well as gender, age, crime, family ties, and ethnic group.

The normative commitments of hermeneutic phenomenology, to a large extent, prescribe the manner of data representation as qualitative. Qualitative research, however, brings together a variety of empirical materials that can range from interviews to visual “texts” which results in a medley of images, understandings and interpretations of the phenomenon being researched of which some could equally successfully be represented in a quantitative manner. In this regard Patterson and Williams (2002: 40) comment that *“nothing within hermeneutic philosophy requires that data representation be exclusively qualitative.....Even in the case of qualitative phenomena, useful information may be conveyed in quantitative presentations of the data.”*

The choice of sampling principle is determined by what it is supposed to represent. In this, distinction can be made between being representative of a population (i.e. a sample that could be generalized to the entire population) and a sample representative of the phenomenon under discussion. There are three factors that played a role in the selection of sample for this particular study.

- the first is the difficulty associated with selecting a sample that would be representative of such a diverse and complex population as could be found in a

country with eleven official languages, and many more unofficial ones, as many different cultural groups, extensive economic inequality among its population, a long history of colonial occupation, and the complex legacy of apartheid, as is the case with South Africa;

- the second is that this specific research is focused on the idiographic level which might be expanded to a nomothetic level only if specific characteristics are found to be across individual cases;
- third, the aim of the research is to reach an understanding of what constitutes a Sense of Place in a particular South African town and the sample should, therefore, be chosen with diversity in mind rather than being a representative sample of a generalised population.

The focus in choosing interviewees, therefore, was not to find a representative sample of the population, but rather people who have the potential to shed light on the research question and its sub-questions as set out in Chapter 1. Aspects such as continuity and rootedness are best answered by older people who have lived in Jagersfontein, or its townships, for a long time (20-30 years) and lived through and experienced different phases of the life of the town. Similarly sociological aspects such as vulnerability and family ties are best answered by female interviewees. As such the population sample includes mostly older people and the majority of interviewees are female. A further deciding factor in the choice of interviewees was the time constraints that forced this research to be focused on a specific aspect of the built environment, namely the business centre. The majority of interviewees are, therefore, either living and/or working in Jagersfontein and thus in close proximity to the focus area of the research. The population sample of 15 does, however, include three people each from the townships of Itumeleng and Mosenthalville; not only to shed more light on the effect distance from the historic node might have, but also to include a larger ethnic diversity. In total there are seven people from the white population group, five from the black population group and three from the coloured population group. The larger focus on the white population group is due to the fact that Jagersfontein was originally a white residential area and is, therefore, the population group that had the longest stay within the town itself. Refer to Appendix A for a more detailed description of the population sample.

Patterson and Williams (2005: 41) point out that although the ability to generalise across a population is lost in this type of sample, it enables the researcher to employ data collection methods that allow a more in-depth understanding of the phenomenon being studied.

Although there are no particular approaches to data collection prescribed in hermeneutics, in-depth interviews are common (Patterson and Williams, 2005: 42). This, however, does not exclude other methods and in this particular research visual aids are employed in cases where it could more effectively convey what is observed (i.e. drawings) and photographic evidence to assist in illuminating observations, interpretations and new insights. Similarly archival records, autobiographies, and old photographs and maps are also used to analyse historical content to serve as background to the study.

Questions for the questionnaires of this particular research are pre-planned and based on previous research (i.e. the researcher's fore-structure of understanding which is obtained via results of previous similar research). It is, however, only used as a guideline to ensure all identified themes are covered and interviewees are encouraged to elaborate on answers which help uncover or bring to light emergent themes not covered by the original questionnaire. The questionnaire is based on the same questionnaire used in the CURDS⁵ study (Bradley et al., 2009) commissioned by English Heritage in Britain, and focused directly on finding the link between Sense of Place and the historic environment as well as Social Capital.

As the purpose is finding meaning rather than generalizability, analysis of each individual case starts immediately after its completion in order to identify issues that could be used in further interviews or observations. In this process the researcher plays an active role in probing and pursuing issues emerging during an observation or interview that are not part of the original list of questions and continuously moving to and fro between preconceptions (fore-structure) and individual components of the whole of each individual case, which in short describes the hermeneutic circle described earlier.

The first step is transcribing the record, be it a recorded interview or an observation. After proofing the transcription, the written record is indexed and in this case it was decided on a

⁵ The Centre for Urban and Regional Development Studies (CURDS) was commissioned by English Heritage in 2009 along with Newcastle University's centre for Cultural and Heritage Studies and Bradley Research and Consulting to explore the role that the historic environment plays in creating a stronger Sense of Place.

sentence as the smallest unit for indexing. This means that each sentence is numbered in a sequential order. The aim is merely ease of reference in finding a particular sentence afterwards. Following this the entire text is read through several times to become familiar with it as a basis for the next step which involves first marking meaning units, logging together those sentences that describe a similar meaning, and after that the development of thematic units under which each individual meaning unit can be logged. In this the meaning units are the raw data, but the development of thematic units is the actual analysis which would shed light on the phenomenon under investigation. These are identified on the basis of the “forestructure of understanding”. The text is further interrogated for interrelationships among the themes which, in turn, can lead to further analysis. Individual cases are continuously revisited after subsequent cases to see if new insights can be gained that might previously have been missed. Finally, each interpretation is justified by means of a discussion in reference to the empirical evidence to explain how the researcher came to specific conclusions (Patterson and Williams, 2002: 46-50).

Quantitative Approach

The quantitative approach is in the form of surveys based on psychometric scaling developed and tested by Williams and colleagues (Williams and Roggenbuck, 1989; Williams et al., 1992; Williams et al., 1995). Accordingly, the normative principles are guided by the ontological, epistemological and axiological commitments of psychometrics.

The purpose of the quantitative approach is, however, not to obtain quantifiable data in order to generalize from a sample of a population so that inferences can be made about the population but, instead, focused solely on the sample group with the aim to test strength of Place Attachment as a pilot study to assess the potential role of the historic built environment in the establishment of a Sense of Place within the South African context.

The survey is cross-sectional (data collected over the shortest time possible) to avoid cross-contamination between different interviewees. Although the interviewees were randomly chosen, Jagersfontein is a very small community and the possibility of people discussing the interviews with others would be exponentially greater the longer the period between interviews.

The open-ended questionnaire [Refer to Appendix B] used for the qualitative research

includes questions that can provide quantifiable data, e.g. age, length of residence, pertinent questions related to the historic environment and so forth. A short section with closed-ended questions, was added where interviewees are asked to provide answers on a three-point Likert scale of “I agree”, “I disagree”, and “I am not sure”. This simplified scale is normally used on children in order to avoid confusion. The possibility for confusion is equally great when interviewing people that speak different languages where different meanings could possibly be attached to the choices of answers on a five-point scale.

The closed-ended questionnaire was used with success in various studies to test strength of Place Attachment and can be found as a component of many of the questionnaires used in testing either Sense of Place or Place Attachment (Shamai and Ilatov, 2005; Williams, 2000; Bradley et al., 2009).

Mixed Method Model

In this research, a concurrent triangulation strategy is followed where both quantitative and qualitative data are collected concurrently to form two databases which are then compared to determine convergences and/or differences between the two. As already discussed, two separate methods, qualitative and quantitative, are used to offset the weaknesses in one with the strengths of the other. In this, the focus is purely on the phenomenon Sense of Place where the aim with the quantitative method is to determine the strength of it and the qualitative method aims to shed light on the aspects that influence a Sense of Place.

Conclusion

Due to the interdisciplinary nature of the research focus and, more specifically, the complex composition of the research population, this research is based on a multi-paradigmatic approach (Phenomenology and Psychometrics) focused on a single case study using a mixed-method model. The two different theoretical approaches ensure that both qualitative and quantitative data can be collected independent of one another and the results of each used to inform and enrich the other. This also ensures a modicum of triangulation of the research results could be achieved which would not be possible using qualitative data alone.

CHAPTER 4: UNVEILING THE *GENIUS LOCI* OF JAGERSFONTEIN

Introduction

The aim with this chapter is twofold. First is to create a visual text of the life-world of the town's residents by means of an investigation of the history and character of the town, as exemplified by its physical features. The built environment has a particular texture and grain, shaped by man's interaction with the natural environment, and in time obtains an identity of its own. Norberg-Schulz (1980: 10-11) refers to this as the *Genius Loci* that originates in the landscape and resonates in the manmade settlements to create an integrated particular atmosphere. Second, it investigates the legibility of the town as framework for everyday experience as postulated by Lynch (1960: 2-3). Together these two form the Place-component of Sense of Place.

This chapter is not intended to separate the work of Norberg-Schulz and Lynch into two distinct compartments of 'character' and 'legibility' as there are indeed many similarities between them. Instead, both of their contributions serve as the theoretical background for an investigation of the concept 'place' as the life-world of the individual and are used in an integrative manner.

Place, however, is always part of a bigger environment, and it is the spaces around it that define it as a place. How big a person's life-world is, is solely reliant on his or her personal worldview. Placing Jagersfontein within its natural environment is of particular importance on account of the special bond that exists between the town and the natural environment. 'Landscape' is then also one of the two categories that Norberg-Schulz (1980: 11) concludes should be used for a description of the structure of Place. Although this is understood to include the landscape from a macro to the micro level, this discussion starts with locating Jagersfontein within its geographical and natural environment as preamble to a brief synopsis of its history, with emphasis on those aspects pertinent to this research. The historical background is of particular importance as it explains the current manmade landscape, and also highlights unique aspects of this town which contributes to a Sense of Place with its inhabitants.

The remainder of the chapter will be focused on how this history is reflected in its manmade environment. The environment, in turn, is analysed in terms of both its character and

legibility in order to grasp an understanding of the particular portion of the life-world of the interviewees that form the focus of this research, the historic business node.

Location

Jagersfontein is situated in the Kopanong Local municipal area of the Xhariep Municipal District in the Free State Province of South Africa. It is 134 km from Bloemfontein, the judicial capital of South Africa and the capital city of the Free State Province, and 11 km from its nearest neighbouring town, Fauresmith.

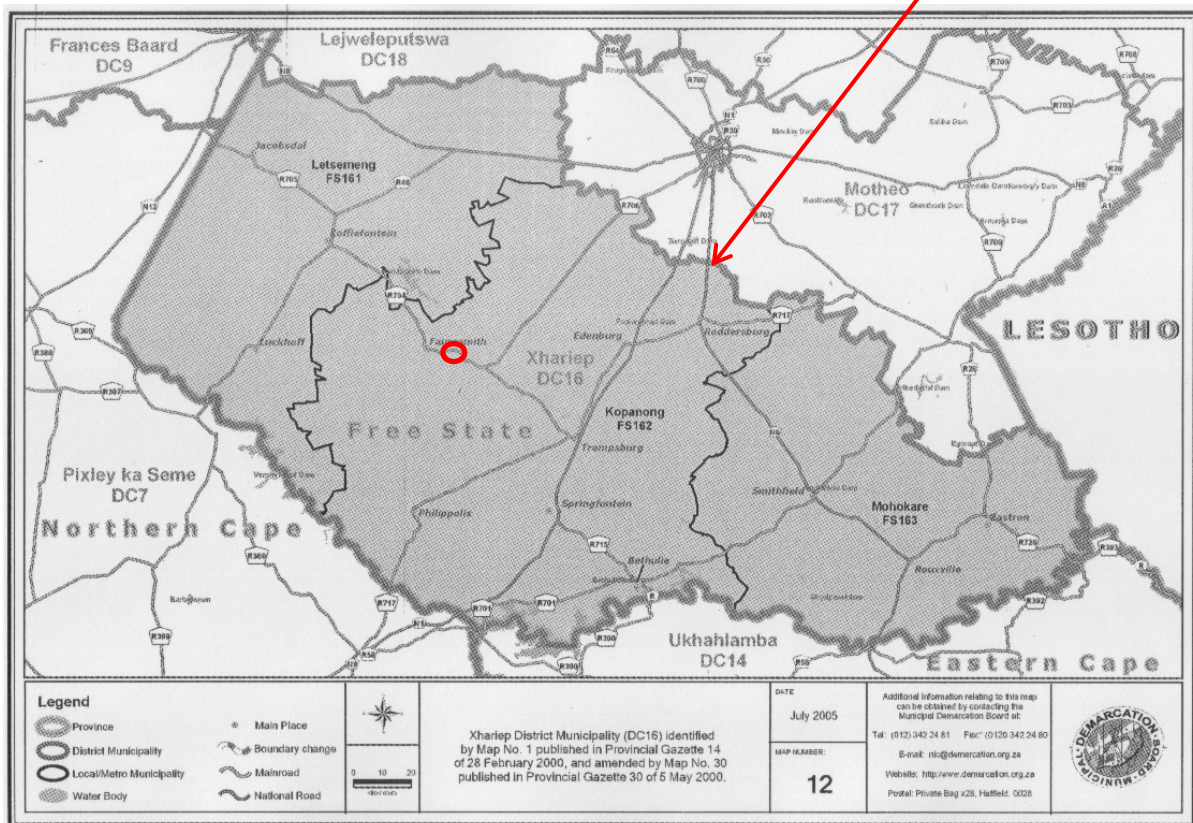


Figure 2: Map of South Africa with an enlarged map of the Xhariep District – Jagersfontein’s location circled in red [Source: www.demarcation.org.za]

Landscape

The landscape morphology of the area is described as lowland with hills. The road from Bloemfontein to Jagersfontein (R706, also called Jagersfontein Road) takes the traveller on a virtually straight line in a south-westerly direction through lowland areas until it reaches a cluster of hills. Nestled in the midst of these hills is the town of Jagersfontein.

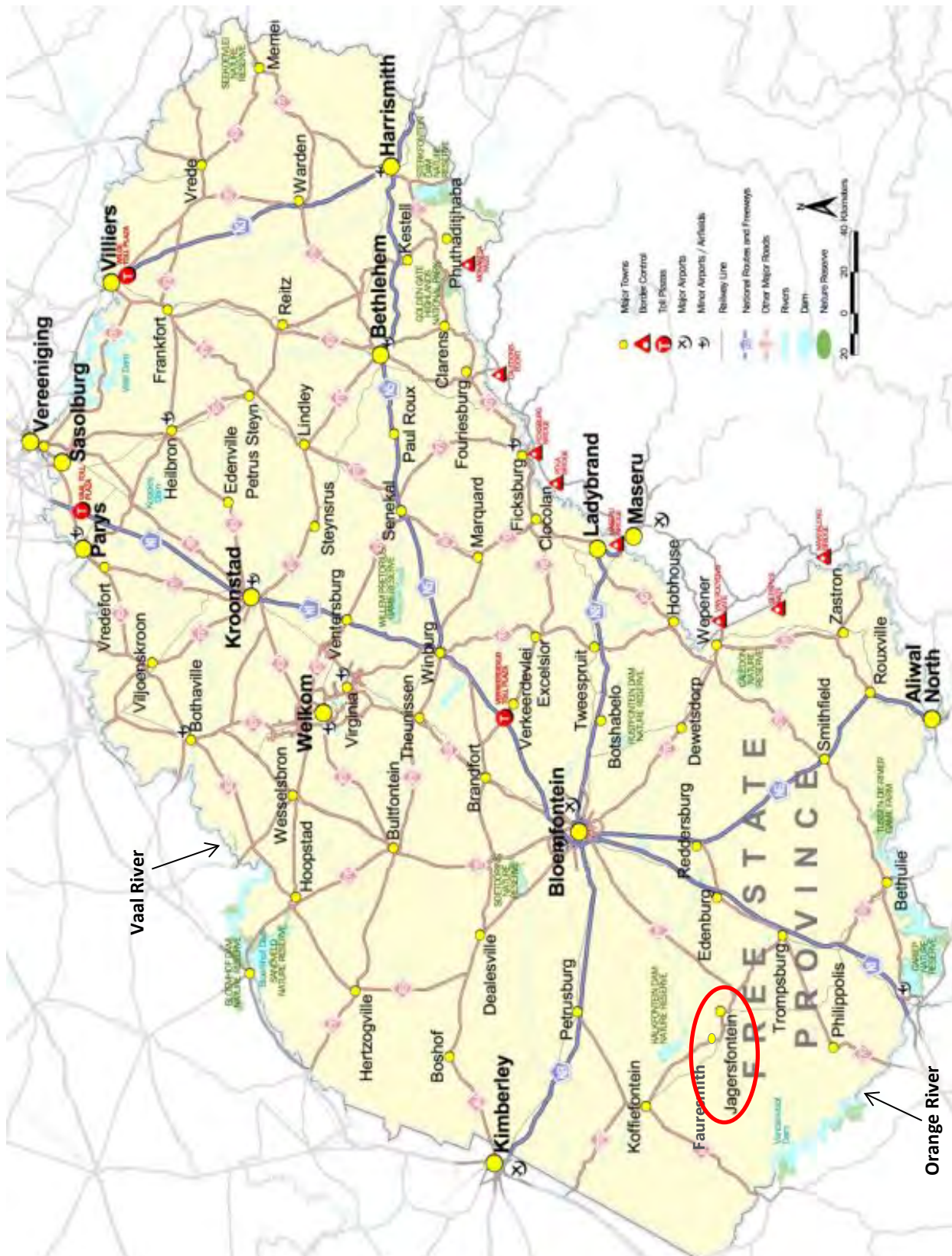


Figure 3: Map of towns in the Free State, including major towns along its borders
 [Source: http://www.southafricaholiday.org.uk/images/mapdetail_freestate.jpg]



Figure 4: View of the landscape from the banks of the Prosesspruit in a westerly direction towards Jagersfontein [Photograph: Philip 2012]

The vegetation is classified as False Upper Karoo, which consists mainly of grasses and low shrubs, the result of overgrazing of the original sweet grass. Trees are virtually non-existent, and reports from early travellers also indicate difficulty in finding firewood in this area (Acocks, 1988: 89).

This would have two major effects on the establishment of a town, namely available building material, and firewood for cooking and heat during the cold winters of the Free State.

The underlying geology is mudstone, sandstone and shale, with dolerite intrusions and kimberlitic pipes (volcanic intrusions) through the Karoo Supergroup sediments. Dolerite is then also the main material that can be found as foundation for the majority of the buildings in Jagersfontein, and for that matter the greater part of the Free State. Clumps of weathered shale are frequently found on the flood plains of rivers and tributaries.



Figure 5: An outcrop of weathered shale on the banks of a tributary of the Prosesspruit east of Jagersfontein [Photograph: Philip 2012]

The town is nestled in a relatively flat area in the midst of a cluster of dolerite hills, following its contour line on the north-eastern side of the town. On the western side are the remains of a kimberlite pipe, which is the very reason for the town's existence [Refer to Figure 6].



Figure 1: Google image of Jagersfontein and surrounding townships in relation to the surrounding hills, mine dumps and open-pit mine



Figure 7: The eroding mine dumps add a moonscape quality to the area [Photograph: Philip 2009]

The manmade world formed by the town and its mining activities mimics its surroundings of lowland and hills in a harmonious manner. The town and its associated townships do not contain any buildings higher than two storeys, and even these are rare, and, similar to the surrounding lowlands, are spread out over a wide area at the foot of the hills [Refer to Figure 6]. As if by design, the mine dumps on the southern side of the town, no higher than the hills, form an almost mirror-image of the hills lying on the northern side of the town. On a clear day, it virtually disappears against the indigo-coloured sky that is so typical of the Free State.

Mining towns provide a glimpse of the unseen world beneath our feet and the wonders contained within it. It adds a time-dimension to our contemporary world that is often difficult to comprehend; and, to the more imaginative, a reminder of a time when the earth was young and dinosaurs roamed the planet. The open-pit mine on the south-western edge of the town serves as a visual reminder of the volcanic intrusion formed millions of years ago and the row upon row of mine dumps tell the story of the rich geology beneath the surface of the ground. To the people of this town it is a symbol of their town's existence, and it should not be strange that these, too, form an important part of their life-world.

However, it had to start somewhere, and unlike the majority of small towns in South Africa, Jagersfontein did not start out as a church community, but instead as a farm like any other

surrounding these small church towns.

Early history (1869-1931)

The Discovery of Diamonds

Jagersfontein took its name from the farm on which it is situated. The farm is said to have originally belonged to a Griqua by the name of Jan Jagers from whom the first registered owner, Oberholzer, purchased it (VAB, Vol 011/5/14/7). The fountain on the farm was known as Jager's Fountain, and it subsequently became the registered name of the farm. The Griqua-connection is honoured by the inclusion of a jackal in the coat of arms of Jagersfontein [Refer to Appendix C]. Griqua = Cgirikwa which means 'the jackals' (Knappert, 1981: 86). Oberholzer eventually sold the farm to Cornelius Visser, who also owned the neighbouring farm Schraalfontein. A relation of Mrs Visser, Mr B.J. de Klerk, went to live on the farm with his son J.J. de Klerk, who was a young man at the time. By this time, Visser was a widow and, with more than one farm, in need of a foreman (VAB, Vol 011/5/14/7).

The first diamond discovery in South Africa occurred on the banks of the Orange River near Hopetown in 1867 (Williams, 1905a: 119). However, it was a chance discovery of a diamond in a place least expected that led to the birth of the town of Jagersfontein and the introduction to a new chapter in the diamond industry of the world. Up to then diamonds were thought to be found in gravelly alluvial deposits only, and the red soil of Jagersfontein gave no indication of what lay beneath its surface (Williams, 1905a: 164).

The events that led to this discovery are relayed as follows. Jagersfontein was also an outspan where travellers could rest and water their cattle during those early years and as such saw a fair amount of travellers on their way to the newly discovered (1869) diamond fields at the Vaal River. One of these travellers on their way back from the diamond diggings told young De Klerk what a rough diamond looked like and how to "taste" it (VAB, 1929). Having been exposed to other diggers passing through the farm, De Klerk by that time also knew that the diggers believed garnets to be an indication of the presence of diamonds. He had noticed "*many small garnets mixed with pebbles of agate were sprinkled along the dry bed of the spruit*" (Williams, 1905a: 164).

After the traveller had left he started digging a short way from the homestead where there was (according to him) an abundance of rubies and other garnets and it was not long before

he found the first small diamond. And so it came to be that the world's first non-alluvial diamond was discovered in 1869 on the farm Jagersfontein in the former Boer Republic of the Orange Free State.

Other non-alluvial finds soon followed at nearby Koffiefontein (early 1870), and further north at Dutoitspan (September 1870), Bultfontein (early 1871), and two sites on the farm Voortuizicht which would later become De Beers Mine (May 1871) and Kimberley Mine (July 1871) (Williams, 1905a: 164-173).

The major difference between Jagersfontein and the mines in the region of presentday Kimberley is that Mrs Visser initially allowed only family and farmers in the vicinity to partake in the novelty of digging for the shiny stones for a monthly licence of £2 (Feder, 1997: 1). These activities quickly attracted other diggers, but Mrs Visser refused all those who were not burghers of the Free State because they were 'uitlanders' (expatriate migrant workers). Through this refusal access to valuable expertise was lost to the other dry mines further north, and this stunted the initial growth of the Jagersfontein diggings in contrast to the diggings in the Kimberley region (Le Barrow, 1971: 86).

By public demand, the Free State government declared the farm a Public Digging in 1871 with an appointed mine inspector from nearby Fauresmith. The state had the same preference as Mrs Visser for allowing only burghers (Afrikaans-speaking citizens) of the Orange Free State to obtain a licence. This resulted in the farm being crowded by even more unskilled diggers working in unsystematic ways, and at a leisurely pace set by the older diggers (Le Barrow, 1971: 86).

In time, however, the novelty must have worn off as finds were few and far between. The strict controls allowing only burghers to obtain a licence were relaxed to the extent that English-speaking Free Staters with digging experience were now allowed to obtain licences to claims on the Jagersfontein farm. This must have eventually led to a complete lifting of any provisos regarding nationality or language as no further mention is made in the records regarding any restrictive measures (Le Barrow, 1971: 86).

A number of people from Fauresmith who gained digging experience at the Kimberley fields were the first to attempt a more systematic working of the diggings at Jagersfontein, and formed a group called the Fauresmith Diamond Mining Company headed by C. Barnard as

manager. The real change, however, came about when a number of experienced Australian gold miners arrived on the scene in November 1878. Among them were the Kerr brothers, who are said to have laid the foundations of the mining industry at Jagersfontein (Feder, 1997: 1).

In 1878, the digging area was surveyed and chartered by G.C. Brand showing 1 244 claims of 30 X 30 feet each [Refer to Appendix D for the survey map]. The Orange Free State government appointed an inspector of the mine, J.W. Lotz, and Mrs Visser appointed J.A. Schickering as her representative. Under the watchful eyes of these two men everything concerning Jagersfontein or its mine would be scrutinised for irregularities (Feder, 1997: 1).

One of the earliest descriptions of the Jagersfontein diggings comes from the travel descriptions of Arthur Roskell, who travelled through South Africa between 1877 and 1883. Having found temporary employment in Fauresmith in 1879, he accompanied his employer on a trip that took them through Jagersfontein which he described as follows:

“We drove through Jagersfontein, just halting for a drink on the way at one of the hotels. The Fields presented a lively appearance. The camp consisted of a couple of hundred wooden and canvas houses, and any quantity of hotels and drinking places. These are generally the veritable signs of wealth in South Africa. Where there’s money knocking about there’s abundance.....” (Roskell, 1886: 36)

The birth of a town

At the same time as the mine, the township was also surveyed but unfortunately this map could not be located. Up to this time diggers lived in temporary canvas shelters or simple wood and iron structures. Even after the town was laid out, the first buildings were not built with durability in mind as the diggings’ future was still not sure. The earliest buildings, therefore, for the most part consisted of sun-dried bricks and corrugate iron (Feder, 1997: 1). A small abandoned shop building in Keyter Street is an example of the building material during the early years [Refer to Figures 8 and 9 on page 39].



Figure 8: Abandoned one-room shop/office at No 12 Keyter Street. [Photograph: Philip 2012]



Figure 9: Exposed brickwork on the side wall reveals both the materials used as well as method constructed [Photograph: Philip 2012]

Official town status

The eclectic social mix of the early mining towns necessitated the passing of new laws to maintain law and order in the country. Illegal Diamond Mining (IDB) had also become a huge problem and the situation at Jagersfontein was directly responsible for the passing of a number of new laws at a special sitting of the Orange Free State Volksraad on 17 March 1882 to deal with the IDB problem. These included the following:

- a drastic ordinance for the suppression of IDB;
- an ordinance establishing a special court exclusively for the trial of IDB cases;
- an ordinance for the appointment of an Assistant Landrost (magistrate) at Jagersfontein;
- a law for the establishment of an efficient police force;
- a law by which Jagersfontein was created a town with the establishment of a Dorpsraad (Town Council. A less formal body than the Municipal Council appointed in 1904);
- an efficient searching law (for diamonds.)

Buildings in Jagersfontein were now erected with permanence in mind. The first government building erected in the new town of Jagersfontein was then also the Magistrate's office [See Figure 10]. This building was designed by Gustave Hallé (Halle, 1885: 5) who was the first appointed (1882) Inspector of Public Works and Government

Engineer of the Orange Free State Government and responsible for a large number of the public buildings erected during the period 1882 and 1887 in the Orange Free State (Schoeman, 1982: 91-93). It is a style that was copied by several buildings that originated in this period. Unfortunately, it did not survive and in 1969 was demolished under great protest from the Jagersfontein public. Although not the oldest building in town, it was closely linked to the development of the town from its inception in 1882, the same year the building was erected.



Figure 10: View of Jagersfontein circa 1885. Magistrates' Office circled in red. [Source: Jagersfontein Mine Museum]

The town, however, started taking on a more orderly appearance with neat buildings on their small allotted erven dotting the town. Business erven were 60 x 60 feet, and residential erven 75 x 75 feet in size. The difference this brought about is clearly demonstrated when comparing Roskell's description of what he saw in 1879 with the way Muller (1890: 277) describes the town he visited barely five years later:

"...een klein dorp, ongeveer een honderdtal rijk...de woningen, ofschoon kleiner, waren veel netter en zorgvuldiger dan bij Kimberley..." [Translation: a small town approximately one hundred in number.....the houses, although smaller, are much neater and more meticulous than at Kimberley...]

Prosperity, though, still eluded this town whilst at the same time the other mines further north experienced an unparalleled boom; lured by promises of instant riches, diggers from all over the world flocked to these diggings.

For Jagersfontein the change came about when a number of people (mostly from the Kimberley mines) formed the Jagersfontein Mining and Exploration Company Limited in January 1887 with the object of gradually effecting the amalgamation of all the claims. By February 1888, it had already acquired the holdings of four other companies and one individual totalling 645 additional claims (Feder, 1997: 2).



Figure 11: Undated picture of the open pit mine during the early stages of manual mining (circa mid-1880s). [Source: Jagersfontein Mine Museum]

After the death of Mrs Visser in 1886, the family sold their farm by public auction in 1887 to the Jagersfontein Mine & Estate Company, a sister company of the Jagersfontein Mining and Exploration Company. Up to this point the farm with all its effects, including the diggings and town, belonged to the Vissers. This sale benefited the town as it was now run like a business. Prior to this there were numerous complaints about the fact that Mrs Visser did not use any of the rental collected for property stands towards the upkeep of the town (Le

Barrow, 1971: 87).

By 1890 ownership of the claims (and town) mainly resided with the Jagersfontein Mining and Exploration Company and United Diamond Mining Company. An amalgamation in 1891 secured total ownership of the mine for the New Jagersfontein Mining and Exploration Company with the exception of only four shares of £1 each (Feder, 1997: 2). It was at this point that the De Beers Company made a first appearance on the Jagersfontein scene when Cecil John Rhodes became a member of the newly amalgamated company's board of directors (Feder, 1997: 4).

Three years prior to that Rhodes and his partner C.D. Rudd had launched De Beers Consolidated Mines on 13 March 1888 after the amalgamation of a number of individual claims at Kimberley that had been steadily bought up over a period of 18 years (Williams, 1905a: 279-280). In 1893, Rhodes formed a strategic alliance with a London-based diamond syndicate of Jewish companies whereby all De Beers' diamonds would be sold to the syndicate (Williams, 1905b: 383, 514). With this alliance they sealed their monopoly of the world's diamond supply and the Free State mines had to keep a close watch on developments (Williams, 1905a: 521). Rhodes, however, had also been elected as Prime Minister of the Cape Colony in 1890 (Le Sueur, 1913: 73). Through his involvement in the Jagersfontein Mine, the British-controlled Cape Colony finally managed to exercise a modicum of control over the portion of the diamond pie that had eluded them with the division of the Diamond Fields in 1876 [Refer to Appendix E for a brief explanation of the Diamond Fields issue.]

Early on in the history of De Beers Consolidated Mines, Gardner Williams, the managing director at the time, initiated the investigation of more effective methods to recover diamonds from the diamondiferous soil. One of the employees, Mr Fred Kirsten, was in charge of the experimentation that took place in the large crushing plant under supervision of Mr George Labram. After several failed attempts Mr Kirsten asked to attempt one final experiment by coating the percussion table with a thick layer of grease as he noticed diamonds tend to stick to oily substances such as axle grease (Williams, 1905b: 379-380). This proved to be highly successful and led to the registration of the Labram Grease Patent in 1898 [Refer to Figure 12]. Official records from the Jagersfontein Consolidated Mining

and Exploration Company dating to the early 1900's show that the Jagersfontein mine also had access to these grease tables, but had to pay a percentage fee to De Beers on all diamonds recovered via this method.



Automatic Diamond Sorter, called the Greaser.

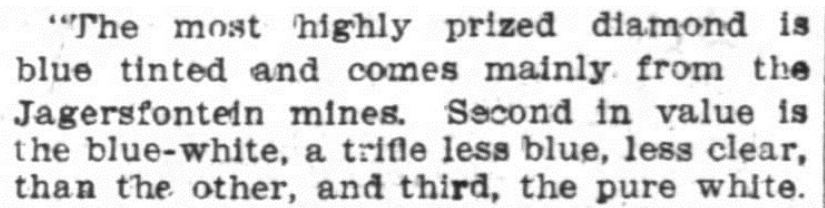
Figure 12: The grease table patent (Williams, 1905b: 379)

A Free State town with a unique physical character

It was during the period of the New Jagersfontein Mine and Exploration Company that Jagersfontein acquired its unique character that is still largely prevalent today. Improved mining methods and equipment, including the use of the new grease table, resulted in more effective mining of the diamond resources so that by 1910 they were already near the bottom of the present-day open pit mine and started moving to underground mining. By 1913 underground mining was fully established and open pit mining ceased. The town blossomed during this period of stability and regular income that could be spent in its shops. It is, therefore, not strange that the majority of the town's buildings today date to this period of prosperity between approximately 1890 and 1914 despite the three year

interruption of the Anglo-Boer War (1899-1902).

It was, however, Jagersfontein's unique quality of diamonds that made Jagersfontein world famous and consequently added to its



"The most highly prized diamond is blue tinted and comes mainly from the Jagersfontein mines. Second in value is the blue-white, a trifle less blue, less clear, than the other, and third, the pure white.

Figure 13: Extract from an article on diamonds, 'Extravagance in Diamonds', in the Washington Post dated Sunday, November 19, 1905.

prosperity. These diamonds are known as blue-tinted diamonds, or brilliants, and are exclusive to only a handful of diamond mines in the world. For a long period in the history of diamond-grading the term Jager (the name taken from the mine where this grade of diamond was identified for the first time, i.e. Jagersfontein) was an official grading term for diamonds of the highest quality (Sauli, 2007). Although this grading was later dropped and replaced by the name "river" (on account of its clarity and colour, not necessarily place-related), any person in the diamond industry today still knows what a Jager is.

It was only with increased scientific knowledge many years later that the reason for this exceptional quality became clear, and in the process Jagersfontein was assigned yet another distinctive characteristic. Diamonds are proverbial geological dinosaurs and date to as early as 3.3 billion years ago. They originate from deep within the mantle of the earth from depths of 180 km down to the transition zone (400-670 km) – and possibly deeper – and are *'amongst the deepest solid objects to reach the surface of the earth'* (Haggerty, 1994: 58). Kimberlites (ancient volcanic pipes) provide the passage for the diamonds to reach the surface. Diamonds of exceptional quality, such as can be found at Jagersfontein, have their origin in the transition zone and these kimberlites are known as super-kimberlites. Jagersfontein is, therefore, considered an important locus in the geological correlation of plume-generated continental flood basalts and kimberlites in the Mid-Cretaceous (Haggerty, 1994: 57).

Not only has it provided diamonds of exceptional quality, but has it also delivered some exceptionally large diamonds in its time. In June 1893 one of the world's largest diamonds, the Excelsior, was found at Jagersfontein. It weighed 971 $\frac{3}{4}$ carats (uncut) and until the Cullinan Diamond's discovery in 1905 remained the world's largest diamond discovered. (Le

Barrow, 1971). This, no doubt, served to focus world-attention on this little mining town.

Two years later, in 1895, another large diamond weighing 634 carats (uncut) was discovered and initially called the Reitz after the then President of the Orange Free State, but later renamed the Jubilee in honour of Queen Victoria's 60th birthday. The Excelsior still ranks third in the world's ten largest diamonds found to date (Deakin, 2014), whereas the Jubilee has since had to give up its position to later finds.

Before this, however, a lesser known diamond, the whereabouts of which no-one seems to know today, was found in 1891. At the time, it was known as the Pam Brilliant but the name was later changed to the 'Jagersfontein'. Originally a 115 carat diamond, it was cut to a 56.6 carat, and it is reported that Queen Victoria was most interested in obtaining this diamond and requested it to be shown to her at Osborne House. The untimely death of the Duke of Clarence (1892), her grandson for whom the purchase was intended, put an end to the negotiations (Gaal, 1977.: 342) (Anonymous, 1956: 23).

Over the years, the Jagersfontein mine produced several diamonds of notable size but none as large as the Excelsior and Jubilee. Few of these are known as diamonds are only named after they have been cut.

On 16 May 1967 a diamond unique to the Jagersfontein mine was found. Throughout the mine's existence, it delivered very few brown diamonds; none of them of any significant size. Not only did this brown diamond weigh 248.9 carats in its uncut form, but it also came from a depth of 2500 feet (762 meters) which is considered an exceptional depth for a diamond of this size in a volcanic diamond-bearing pipe. It was purchased by Baumgold Bros. of New York and cut into a pear shape weighing 111.59 carats. When cut it proved to have an outstanding brilliance which is not usually associated with diamonds of strong colour. On account of its brilliance and colour Joseph Baumgold named it the Earth Star (Michael, 2013).

Without taking into account these unique contributions of Jagersfontein to the diamond industry, i.e.;

- the first place of discovery of non-alluvial diamonds;
- the first diamond mine to produce the scarce blue-white diamond;

- its contribution of two of the world's largest diamonds;
- the uniqueness of some other diamonds; and
- holding the record for the world's steepest hand-dug open pit mine,

it is not possible to understand why its residents value its historic built environment which, apart from the open-pit mine, are the only reminders of its early days of fame.

The post-Anglo-Boer War years

During the recovery period after the Anglo-Boer War (1899-1902) the mining company started with the construction of the reservoir on the Prosserspruit on the adjoining farm Woolwash that it bought in 1897 following a severe drought. From the onset of the mine water scarcity was a huge problem as dry mining is as water dependent as other diamond mining but without the benefit of the source of the diamonds being conveniently located within a water resource. In the beginning wells were dug, and the mine would from time to time park water carts at central points in the town to provide water to its residents (Barnard et al., 1982: 32).



Figure 14: Water hydrant at the corner of Star- and Brand Streets dating to 1913 [Photograph: Philip 2011]

14] erected at strategic points throughout the town. Each hydrant could be operated with a water penny [Figure 15] that could be purchased from the municipality and would dispense exactly three gallons of water when

During the same year the Woolwash dam was completed in 1907, the mine manager informed the town council that they would be able to provide the town with water from their new dam, provided that the council would provide the infrastructure for that in terms of piping and a filtering system. By 1912, the municipality had managed to procure sufficient funds to contract Stewardts and Lloyds for the project and the system was completed by 1913. The system consisted of a network of pipes and 40 hydrants [Figure



Figure 15: Water pennies [Source: De Beers Archives]

inserted in the water hydrant (Barnard et al., 1982: 33)

In the interim, however, Jagersfontein obtained municipal status in 1904 and the Dorpsraad was replaced by a municipal town council. All property rights, however, still resided with the mining company which severely curbed the town council's ability to develop the town without the permission of its landlord. It was only on 3 September 1941 after repeated requests from the town council that the new owners, De Beers Consolidated Mining, formally donated the municipal grounds to the municipality.

In the period between the end of the Anglo-Boer War and the beginning of World War I, the majority of the town's wood and iron shops that were erected in the years prior and immediately after the war were replaced by brick and mortar buildings.

The economic cost of war

Although the Jagersfontein Mining and Exploration Company effectively remained the owners of the Jagersfontein mine (and town) until 1931, world events following so soon after the Anglo-Boer War of 1899-1900 rang the death knell for a mining company that was comparatively much smaller than its De Beers-owned counterpart in the Kimberley region. Already it had lost three years of mining during the Anglo-Boer War and was still in the process of making up the deficit in the years following this when the depression in America during 1908 led to a restricted market for diamonds and consequently large-scale retrenchments at the diamond mines in South Africa.

Mining, however, continued during 1908, but with the outbreak of World War I (1914) washing of diamonds was suspended until 1916 and mining operations resumed only two years after that in 1918. Barely three years later in 1921 mining operations were once again suspended as a consequence of the post-war depression of 1920 and the flooding of the market of diamonds by Russia after the Bolshevik revolution.

Mining was resumed in 1922 but subsequent discoveries of diamonds at Alexander Bay in 1926 and Lichtenberg in 1927 once again negatively affected the economies of diamond mining. It was, however, the 1929 Wall Street crash that led to a worldwide depression which forced the mine to close shortly after De Beers Consolidated Mining took over the mining effects at Jagersfontein.

This is by no means a full account of its early history, but the factors mentioned here are central to an understanding of a Sense of Place among its current residents, even if they were not actively part of this early history. To them it is a source of pride, that which makes Jagersfontein uniquely different to any other town.

The later history (1932 – current)

The De Beers era

This period in Jagersfontein's history was preceded by two events, one seemingly insignificant at the time as Jagersfontein played a role in Ernest Oppenheimer taking over chairmanship of De Beers in 1928. The first event was when the young Ernest Oppenheimer became an alternate director of the Jagersfontein mine in 1911. The second, more telling event was the gradual buying up of shares in the Jagersfontein Mine by Solly Barnato so that, by 1916, he was the largest individual shareholder in both Jagersfontein and De Beers mines. His support enabled Ernest Oppenheimer to take over the chairmanship of De Beers (Fraser, 2004).

On top of the poor world economy at the time De Beers took over the management of the mine and its effects in 1931, most of the mine equipment was out of date and not on a par with their other mines further north which, of course, increased the cost of mining. By 1937 impending worldwide trouble was already evident with the outbreak of war between Japan and China. By the 1st of September 1939 with Germany's invasion of Poland, and France and the United Kingdom's subsequent declarations of war on Germany, the possibility of a second world war had become a foregone conclusion. Jagersfontein's mining operations thus remained on hold from 1932 until a year after the end of World War II in 1945.

In 1946, De Beers instructed their consulting engineers to proceed with development for the re-equipping and re-opening of the mine. Production was started, and the mine was officially re-opened on 12 December 1949 (Anonymous, 1949: 15).

Although this period can be considered as the second major period of prosperity for the town, it did not leave such a visible footprint on the town itself as had the first period with the Jagersfontein Mining and Exploration Company as the town was already established. Unsuccessful negotiations with the town in obtaining municipal grounds for the erection of housing for mine employees prior to the re-opening of the mine resulted in the

establishment of a new mining town, Charlesville, south-east of Jagersfontein. This meant that the town mainly served as economic business centre for both the mine and the mining village, as well as for nearby smaller towns.

De Beers' contribution to the mining environment of Jagersfontein falls outside the scope of this pilot study which is focused on the business node of Jagersfontein in particular and the town in general.

Looking back over the series of events that took place since the beginning of World War I, it is understandable why the town itself has experienced very little change since the turn of the 19th century. The poor markets caused by successive wars and depression periods are more likely to have a profound effect on a town that is solely reliant on an export product for its survival than, for instance, the surrounding agricultural communities. In this case it acted like a double-edged sword; on the one hand it stunted growth, but on the other hand it captured Jagersfontein in a 'time capsule' that in time obtained a value of its own.

"The colourful and picturesque town, nestling in its shallow valley, flanked by low, bush-covered hills, is still pristine in its brightly-coloured paints; its houses, churches and public buildings, many nearing a century old, are still in an excellent state of repair. 'And that's how we hope to keep it,' says Mr van Pletzen. 'Though we do not know what the future holds for us, Jagersfontein will certainly not become a ghost town.'" (Anonymous, August 1971: 4)

These words were spoken by the Mayor of Jagersfontein shortly after the last load of diamond bearing soil was hoisted from the depths of the earth of the Jagersfontein Mine when De Beers finally closed it down for the last time in 1971. Words that certainly would come back to haunt him were he still alive, because for the next nearly forty years the mine lay dormant and the ravaging effects of this on a town with no means of generating an income slowly but surely started taking its toll.

This statement, however, also clearly states the town's intention to retain its historical buildings and explains how it survived in the subsequent years to date. Lynch (1972: 42-43) remarks on the difference age makes between a built environment being viewed as 'historic' or 'backward'. If it is sufficiently old then it becomes historic and is not viewed as a

threat to the present, i.e. not providing the image of a backward town. It would seem that by the time the mine closed down, the town was already considered worthy of conservation which indicates it was viewed as 'sufficiently old' to be regarded as historic, rather than 'backward'.

In the meantime De Beers remained the owners of the mine with seemingly little regard for the welfare of the town it left to fend for itself. Three years prior to the closing of the mine a socio-economic assessment was conducted by the University of the Free State to assess the impact the closure of the mine would have on the town. Then already it was pointed out that three small towns situated as closely as Charlesville, Jagersfontein and Fauresmith had little chance of survival as individual towns in a rural area that is mainly reliant on agricultural activities for its income. The suggestion was that Charlesville, which was only approximately 20 years old at the time, be demolished, and Jagersfontein and Fauresmith combine their forces to become one town (Anonymous, Nov 1968). Instead, De Beers Consolidated Mining donated the mining town, Charlesville, to the Department of Welfare for the housing of pensioners and people with disabilities unable to work (Barnard et al., 1982: 44). This had an adverse effect on the economy of the town as it meant an addition of economically inactive residents that is not conducive to the growth of the town.

When De Beers finally sold its mining effects in 2010 to the Superkolong Consortium, the price tag included a social responsibility clause whereby the new mine owners had to ensure they would do the following:

- *“establish a Community Trust of which the Jagersfontein Community is the sole beneficiary;*
- *the Community Trust will hold 10 per cent equity ownership in the holding company that acquires the De Beers Jagersfontein assets;*
- *the Trust must, on formation and registration, receive R20 million in cash for investment and, after due process, expenditure on community benefiting projects;*
- *the Trust will have a deferred right to an amount of R30 million, which will accrue interest over time and contribute to the future financial position of the Community Trust;*
- *the new mine owners must be committed to facilitate skills transfer to members*

of the community, with a view to ultimately sourcing skilled labour from Jagersfontein.” (JCK, 2010)

During this later period very few new buildings were added to the business area. The Jagersfontein Hotel that was situated at the corner of Brand and Meteor Streets was destroyed in a fire and replaced by the current building. Pep Stores in Town Square was gutted by a fire but only received a new façade and the building at the corner of Brand and Kohinoor in Town Square was demolished to make place for Lewis Stores. The latest development was the demolition of the old blacksmith store at the corner of Kerr and Central Street in Town Square to make place for the new library during the 1990s. And, of course, the disastrous strike in 2009 against the municipality that resulted in the torching of the 1892 municipal offices in Market Square. [Refer to Appendix I for a map of Jagersfontein.]

Legibility and Character of Jagersfontein

Introduction

Jakle (1987: 8-9) comes to the conclusion that it is the visitor that is more clearly able to express his or her impression of a town with a simple statement, rather than the resident who will have a more complex vision on account of *‘his immersion in the totality of his environment’*. And, of course, the tourist’s impression will be based on his or her impression of the spirit of the place; that which the town manages to convey through its totality of being at any given moment in time.

And if this visitor happens to be an author/historian with some background knowledge of the town’s history, one might find a much romanticised version of the *genius loci* as inspired by the remaining evidence of the early past. Such a person is Robert Webster, who conjures up a lively image of a day in the life of Jagersfontein during those long forgotten early mining days, complete with *‘honky-tonk pianos blasting away’* at the end of a long, hard day of physical labour at the mine (Webster, 2005: 140). More telling, however, is Webster’s invitation in his conclusion: *‘Go and walk her [Jagersfontein] streets one day – you will sense the spirits of our country’s forgotten past as I have done’*.

So what is it then that inspired Webster so greatly to totally underplay the story of the

mystery metal box that was the reason for his visit to Jagersfontein, and end up being totally enamoured by the town itself? To create a visual text of what Webster experienced is exactly the aim with this second half of the current chapter, but with an added dimension as life-world for its current residents.

In this the concepts of character and legibility are merged in their communal focus on the 'lived space' as postulated by Norberg-Schulz (1980: 11) and the effect the legibility thereof has on the well-being of residents and visitors alike (Lynch, 1960: 4).

Lynch (1960: 47) describes the concrete reality of the lived space in terms of 'nodes' (strategic points), 'paths', 'edges' (boundaries), 'districts' (an area with an identifying character), and landmarks, whereas Norberg-Schulz (1980: 10) refers to this concrete reality as 'enclosures' and 'openings'. Essentially these are the same as Lynch's nodes with enclosures representing districts. Both have edges, as do paths which are the same as Norberg-Schulz's openings.

The focus of this study, the historic business centre, is analysed in terms of the texture and grain of each the aforementioned categories to come to a conclusion on the *genius loci* of the everyday-world of the town's inhabitants and how it contributes to their Sense of Place.

In doing so there is a continued merging of concepts where edges become walls and roofs, nodes become squares, paths become streets, and each adds or detracts from a specific overall character (Norberg-Schulz, 1980: 15). Each architectural component is assessed as character and time indicator, rather than as purely architectural value. In essence the question is as Lynch has posed in his book of the same title, *What time is this place* (Lynch, 1972)?

To reiterate the reason for the focus on a particular area; as stated in Chapter 1, the business node is an area that all residents would have extensively interacted with; and, as a pilot study a larger focus area would have added an unnecessary burden on the volume of fieldwork which may not necessarily change the outcome.

Legibility through navigability

To totally lose your way in Jagersfontein should be considered a special feat as it is near on impossible not to know where you are at any given point in the town. The town is small, laid

out in a grid system which is easy to navigate, and bordered by hills in the north and mine dumps in the south. Buildings that can serve as beacons such as the various churches are not clumped together but spread throughout the town and serve as further navigational tools. In addition to this, the only roads that are paved are those leading into the town in the east, around the Town Square, and exiting the town in the west, i.e. those in the business area. The Town Square itself serves as hub from where all roads spike to the north, east, south and west. As a consequence few, if any, people use street names in giving directions within the town. None of the interviewees referred to any street names and used directions such as left, right, three roads up, two roads down, or turn right at the Roman Catholic Church, and so forth.

Lynch (1960: 61), however, points out that the regularity of a grid system can also make it difficult to distinguish one path from another. The validity of this point was experienced at a personal level as focusing on details of the buildings as I traversed from one end of the town to the other, I at times lost track of the number of roads I crossed and was not always sure in which particular street I found myself – which was of importance for the purpose of recording, not finding my way back to a particular point. Even though there are no more than five roads going in any direction, one street pretty much looks like the next in the residential area. The business node, however, is distinctly different to the residential area.

Legibility through form

Legibility, however, is more than just the ability to navigate a town. It is, amongst others, the clarity of recognising an area or structure as having a specific function, such as churches, shopping centres, and so forth. A clear example of this would be the old Phoenix Hotel which strictly speaking does not fall within the area under discussion but is clearly visible from the main road that leads through the town [Marked with an 'X' in Figure 17]. The unsuspecting visitor might knock on the door looking for a room for the night and be met by a clergyman as this old hotel building is currently being utilised as a church and there is nothing apart from the letters 'APK' to identify its nature – which in itself is insufficient as it could mean anything. This is, therefore, a clear case of form negating the meaning of a structure, rather than reinforcing it (Lynch, 1960: 46). Adding to this confusion is this building's similarity to the character of the majority of buildings in the business node in

terms of its texture and grain, in contrast to the residential buildings surrounding it.



Figure 16: The Old Phoenix Hotel at the corner of Fauresmith and Keyter Street dating to approximately 1904 is currently used as church by the Afrikaans Protestant Church [Photograph: Philip 2012]

Business area as node

According to Lynch (1960: 48-49) nodes are closely related to paths and defined by, amongst other characteristics, their edges. In the case of Jagersfontein this is clearly illustrated by the fact that the businesses along the edges north and south of the main road running through the town define this as the business node. The business node is, therefore, more than just Town Square (shops around Market Square) and includes Central Street leading to it from the east, and Meteor Street exiting the town on the western side.



Figure 17: The business node (indicated in red) starts from the eastern Central Street-entrance to the town, around Market Square, and along Meteor Street towards the western exit of the town. The blue cross at the corner of Fauresmith and Keyter Streets indicate the location of the Old Phoenix Hotel.

This part of the town is made highly accessible with all the north/south roads in the town crossing it and with the eastern and western entrances being the two main entrances to town.

Legibility through function

The business area is first and foremost grouped by its function. As such its legibility lies in the ability to recognise individual buildings as grocery store, butchery, clothing store, furniture store, bank, Post Office, lawyers' offices, and so forth. Apart from the bank and post office, only one business sign provides clear information on the range of services the business provides and, equally important, operating hours. The latter is an aspect that is curiously lacking in the majority of businesses; in fact the town has very few time indicators and only one of the ten churches (the Dutch Reformed Church at the corner of Weil and Hospital/Imperial Streets) has a tower clock. Time seems to be of no consequence.



Figure 18: Isaac's at the corner of Meteor and Brand Streets is the only business other than Standard Bank and the Post Office that has an indication of its operating hours [Photograph: Philip 2012]

South African chain stores Lewis (furniture store) and Pep (clothing and home store) are familiar landmarks that can be found in most towns and cities in South Africa. These shops usually have large display windows which clearly indicate the nature of the stores so that international visitors are in no doubt as to the nature of these shops. Unfortunately the same cannot be said of the other shops.



Figure 19: Lewis (corner of Brand and Kohinoor Streets) and Pep (Meteor Street) stores branding are the same throughout the country and often serve as landmarks for direction-finding [Photographs: Philip 2012]



Figure 20: Clothing Store in Brand Street [Photograph: Philip 2012]

The only indication of the nature of the business of the clothing store in Figure 20 is a display at the entrance to the shop. The display windows are closed off by curtains so that there is no indication of its nature after hours. This shop has no name displayed, and, as it is one of several clothing shops, most likely has to rely for directions to it on its landmark neighbour as it is situated opposite the Town Hall in Brand Street.

Only two shops display a street address on their signs (e.g. Figure 21), which can both aid in direction-finding as well as for locating the shop in a particular part of the town.



Figure 21: Lebcot Auto Spares in Central Street [Photograph: Philip 2012]

Some businesses are confusing in their sign displays (Figures 22 and 23) and others are not legible to all, especially foreigners, in terms of the language used (Figures 24 and 25).



Figure 22: Shop in Meteor Street - MicroFin Cash Loans or dairy (melkwinkel)? [Photograph: Philip 2012]

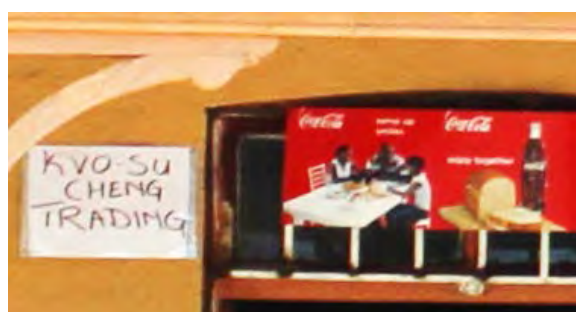


Figure 23: This shop in Meteor Street is indicated as a trading store but the Coke sign next to it is no indication of the nature of its trading [Photograph: Philip 2012]



Figure 24: The funeral parlour in Meteor Street uses the Afrikaans term (begrafnisdienste) which limits its identification to only those conversant in Afrikaans [Photograph: Philip 2012]



Figure 25: The butchery in Kohinoor Street uses the Afrikaans word 'slaghuis' only and with the red background to the meat that could potentially serve as indicator, makes it difficult to recognise it as such from a distance [Photograph: Philip 2012]

Many shops are recognised as such mainly on account of their proximity to others which are clearly marked as businesses of some kind or another. Norberg-Schulz (1980: 166) states that *'the meaning of any object consists in its relationships to other objects'*. At least two buildings, however, are residential homes, although they were originally shops, and could therefore be mistaken for businesses too.

However, it is the structure of the business node that is of particular interest here; that which Norberg-Schulz (1980: 166) refers to as *'the formal properties of a system of relationships'*, as it is this *'system of relationships'* that provides the business node its particular character.

Legibility in uniformity of character

Despite the poor legibility in terms of the function of buildings, the majority of the buildings in the business node form a harmonious whole that lends this area a specific character which is distinctly different to the residential areas. The distinctiveness of this area is reminiscent of a specific time period to a point that the few buildings and/or elements that are evidently of a later period stand out like discordant notes in a symphony.

Although the preservation of this area might not originally have been intentional, as mentioned earlier, Lynch (1972: 60) points out that for preservation to have an impact, the saved elements should not be random or trivial as it will *'create a sense of the past as chaos'*. Furthermore, saving aspects that are indicative of the old ambience such as scale and pathways is preferable in aiding a preserved area's concept of time. In this aspect the business node forms an integrative whole in terms of its building style, density and street widths that all contribute to placing it within a specific time frame. Smaller details such as the water hydrants dating to 1913 add a further touch of authenticity to its overall character – perhaps, particularly because during the 1970s they were converted to fire hydrants. This gave them a new function so that they do not merely serve as 'props' to create a certain atmosphere.

In terms of character Norberg-Schulz (1980: 14-15), too, concedes that *'character is determined by the material and formal constitution of the place'* but also adds that *'a phenomenology of place therefore has to comprise the basic modes of construction and their relationship to formal articulation'*.

Picton-Seymour (1977: 376) makes only brief mention of Jagersfontein in her book on Victorian buildings in South Africa. Without elaborating on any particular aspects she merely mentions the following:

"Of a very different era are the remnants of mining town splendour at Jagersfontein, leftovers from the days when the mines there yielded choice diamonds, some of considerable size."

As her discussion immediately prior to this passage refers to Free State towns with an earlier Georgian influence in their architecture, and as the quoted passage refers to the heyday of mining at Jagersfontein, one can only assume that she refers to the Late Victorian Period (1880-1901), specifically the second half of this period which continued well into the Edwardian Period (1901-1910) and beyond. This coincides with Jagersfontein's first blooming period between approximately 1890 and 1914.

At the same time, however, Picton-Seymour (1977, p. 377) also mentions the British influence of Sir Herbert Baker's style in the Free State during the early 1900s. At least one building in Jagersfontein is linked to Baker and his associates, namely the bank. Although

she fails to mention whether it is the current Standard Bank (\pm 1908) at the corner of Brand and Meteor Streets [Refer to the bottom right building in Figure 43 On Page 67] or the earlier Bank of Africa (1902) at the corner of Keyter and Meteor Streets [Refer to Figure 26 on page 60], it is most likely the earlier Bank of Africa, as this exhibits some Bakesque elements.

At best, however, Jagersfontein's architecture can be described as a mixture of both Victorian and Edwardian influences overlying the earliest phase of the more simplistic Late Georgian style.

The descriptive elements that follow are explained by means of historical references to place them within this specific time frame and to point out Victorian and Edwardian aspects of the built environment to aid in gaining an understanding of the town's *genius loci*.

Streets and sidewalks

The width of streets ranging between 12 and 20 m wide would have been largely determined by the method of transport used during the time the town was laid out and serves as time marker. All traffic from the Cape Colony during the late 1800s would have approached the town from the eastern side along Central Street. Apart from the street sections running around Town Square, this is the widest street in Jagersfontein. The main modes of transport during this time were horse-drawn passenger/post coaches, and mule- and ox-wagons for goods deliveries. Two-seater buggies drawn by a single horse were most likely used for personal transport as can be seen in several older photographs of the early period of Jagersfontein. The only street that has a large portion that is notably narrower than the rest is Reid Street with a 5 m wide canal running along its northern side, indicating a later date for the canal. Reid Street, however, is in the residential area and does not form part of the business node. [Refer to Appendix J for a map of Jagersfontein.]

The street names read like a veritable page of the early history of Jagersfontein where the majority of streets in Jagersfontein are named after the most prominent miners and mining companies in existence at the time the town was formally surveyed in 1878, with only one street, Dickson Street, referring to a later period.

In the business node these streets (including those that lead from this area) are as follows:

- Original mine and town owner: Visser Street
- First Government Inspector of mines: Keyter Street
- Early mining companies/syndicates: Central -, Meteor -, Kohinoor -, and Weil Streets
- Individual miners: Frames -, Kerr -, Beddy -, Harrington -, Brand - and Dunn Streets
- First Manager of the New Jagersfontein Mine and Estate Company Ltd (1890) – Dickson Street

The earliest surviving map of Jagersfontein dates to 1900 and shows that these streets were then already named as above. [Refer to Appendix F]

Density

The size of erven affects specific spatial elements of the built environment such as density and building orientation. The sizes of both residential and business erven seem to have remained the same as was originally stipulated in Article 10 of Ordinance 3 of 1871, as all subsequent amendments to this ordinance refer to the original ordinance whereby erven for dwellings of 75 X 75 feet and 60 X 60 feet for businesses were granted to those who



Figure 26: The original building of the Bank of Africa dating to 1902 is situated right on the border of the erven to its right and left and is a clear indication of the small size of the business erven [Photograph: Philip 2011]

qualified for leasing of such premises. This is confirmed by a letter from the manager of the Bank of Africa addressed to the then Lieutenant-Governor, Major Sir Hamilton Goold-Adams, dated 6 August 1902, in which he explains why the

new bank building will block the light from the Magistrate's Offices on its southern side. The manager states that the erf, situated at the north-eastern corner of Keyter and Meteor streets, is only 60 x 60 feet (334.45 m²) in extent and, as their intention is to make as much use of the erf as possible, the building will affect the lighting on the southern side in contravention of the government's '*title of lights*'.

The majority of buildings in the business area are closely spaced with the exception of those in Central Street where the erven are larger which might be indicative of this originally

having served as a residential area. In addition this area also has several unbuilt erven that creates the illusion of being more spacious than the remainder of the business node [Refer to Figure 28 on Page 62].

The greatest deciding factor in determining the original sizes of the erven must have been of a financial nature as Mrs Visser tried to fit in as many erven as possible in the available space between the mine and hills to ensure the highest possible turn-over in revenue via lease monies.

Building footprint, orientation and setback

The majority of the buildings in the business node have a square or rectangular footprint with the long side facing the street, and a zero setback which in the absence of pedestrian sidewalks means they open directly onto the streets [Refer to Figure 28 on Page 62].

Building material and method of construction (as age indicators)

The building material is no different to that used in the majority of Free State towns from the late 1800s up to early 1930s namely bricks on a stone foundation and fitted with corrugated iron roofs. Stone used for the foundations was either sandstone or dolerite. In Jagersfontein, dolerite, of which there is no shortage in supply, was used more often than sandstone.

Only one wood and corrugated iron building from the town's early mining history remains standing in Jagersfontein [See Figure 27]. This building is still largely intact with the only change to the façade the addition of a low veranda wall and brick pillars. Similar buildings from Kimberley's mining history are also still extant in Kimberley.



Figure 27: The only extant wood and corrugated iron structure from the early mining period in Jagersfontein is situated at No 11 Meteor Street. [Photograph: Philip 2012]



Figure 28: Google view of Business Node

The earliest brick buildings were constructed of large handmade sun-baked bricks, of which only one business building survives. [Refer to Figures 8 and 9 on Page 39 – this section of Keyter Street was originally part of the business area but only the Post Office remains today.] This was followed by the use of moulded sun-baked bricks, for example the old Phoenix Hotel in Fauresmith Street, and perhaps several of the older homes. The later buildings, however, were constructed with kiln-baked mass-produced bricks that became more readily available after the 1890s with the extension of the railway lines to the interior (Roodt, 1984: 213). Although Jagersfontein itself was only connected by rail in 1905, the nearest station prior to this was Jagersfontein Road station which is only 43 km south-east of Jagersfontein (now known as Trompsburg).

Bricklaying methods include English and English Cross bond for the oldest buildings, followed by Flemish bond, and for the more contemporary buildings, Stretcher bond.



Figure 29: English Bond

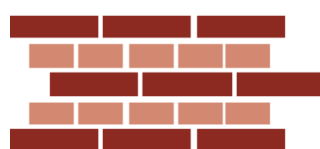


Figure 30: English Cross Bond



Figure 31: Flemish Bond



Figure 32: Stretcher Bond

The Anglican Church is situated at the corner of Star and Brand Streets but its garden extends onto Erf 73 facing Market Square. This building dates to 1891 and was constructed with the English bond method using fired bricks [Figure 33]. The Town Hall (in Market Square) dating to 1914 was constructed using the English Cross bond method with what appears to be poor quality fired bricks [Figure 34]. A comparison of the brickwork of buildings with a known date of construction consistently shows that the English Bond method was used up to approximately 1900 and followed by English Cross Bond brickwork in the period after the Anglo-Boer War (1899-1902).



Figure 33: Exposed brickwork of the Anglican Church dating to 1891 [Photograph: Philip 2012]



Figure 34: Exposed brickwork of the Town Hall dating to 1914 [Photograph: Philip 2012]

Exposed brickwork on shops in Central Street, as well as on unplastered buildings, show that they were constructed with the English bond method. This might be an indication that these buildings predate many of those in Town Square itself.



Figure 35: Boarded up duet building in Central Street is constructed using the English bond method. The veranda wall and pillars are later additions. This structure is similar to several other duet houses found in the residential areas [Photograph: Philip 2012]

Victorian and Edwardian elements

Picton-Seymour (1977: 1) refers to the Victorian and Edwardian periods as *'the age of mass production and prefabrication, the age of cast-iron and corrugated-iron'* which describes the two most notable elements of the buildings in the business node of Jagersfontein. The completion of the railway line to Bloemfontein in 1890 made not only coal more readily available, but also made it possible for mass-produced Macfarlane cast-iron products imported from Britain, as well as corrugated iron sheets, to be transported to the interior of South Africa at a more reasonable cost than had been via ox-waggons (Roodt, 1984: 212). Simple rectangular bungalow styled buildings from the earlier periods could obtain a touch of Victorian flair by the addition of a bullnose or bell shaped veranda and cast-iron posts and trelliswork.

Sectional view of typical veranda profiles of the Victorian period (Theron, n.d.: 39)

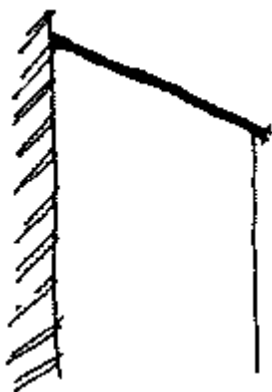


Figure 36: Straight (lean-to)

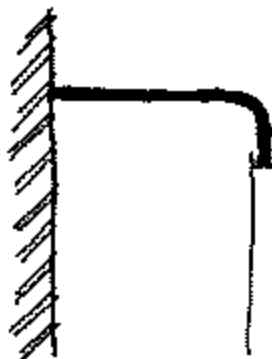


Figure 37: Bullnose



Figure 38: Regency



Figure 39: Bell cast

There is no example of the Regency veranda roof style in the business node or the residential areas, and only one each of the bullnose and bell cast examples exist today, although several more can be found in the residential areas. The lean-to veranda roof style is the most commonly found in both the business node and residential areas.



Figure 40: Meteor Street [Photograph: Philip 2012]

Only four different styles of cast-iron fretwork are found on buildings in Jagersfontein but several buildings share the same style. Judging by earlier photographs the majority of the buildings in the business node seem to have gained a veranda with cast-iron fretwork post 1900.

According to Roodt (1984: 218) the Free State lagged behind the Cape and Transvaal (Gauteng) in this regard as in Bloemfontein the cast-iron period only gained a

foothold after the Anglo-Boer, and then just for a brief period.



Figure 41: Cast-iron fretwork in the business node [Photographs: Philip 2012]

Prior to this period wooden saw-fretwork was already popular and can still be seen on several of the houses in the residential areas. As in Bloemfontein (Roodt, 1984: 218), cast-iron embellishments are restricted to the business area.

Corrugated iron as roof material, was, however used from the earliest time in Jagersfontein. The hot climate favoured a pitched roof and a roof vent is an absolute necessity. The use of corrugated iron as cladding material makes both possible. The majority of the earlier buildings have front protruding roof gables of which only one remained in the business node at the corner of Brand and Meteor Streets in Town Square. This building dates to circa 1885, and although the windows have been changed, behind the false façade above the veranda line is the original veranda, including its cast-iron posts and fretwork [Figure 42].



Figure 42: Shop building at the corner of Brand and Meteor Street dating circa 1885 [Photograph: Philip 2012]

Earlier photographs show that many of the buildings in the business area that extended towards the southern side of the town were of corrugated iron and quite a few within the current business node as well. All of these, save the one mentioned earlier, were replaced in the period between 1900 and approximately 1914. These ornate buildings are clearly distinguishable from their earlier counterparts that received the addition of some Victorian embellishments. Roofs are multi-faceted with front protruding gables with decorative air vents, and particular attention was paid to exterior finishes with well-detailed mouldings, quoins, decorative bargeboards and finials. Verandas with intricate cast-iron embellishments on slender cast-iron posts shelter the large display windows from the fierce sun during summer [See Figure 43].



Figure 43: Three shops and the Standard Bank in Town Square (Meteor Street side) dating circa 1908-14 [Photographs: Philip 2012]

Office buildings kept to a more simplistic style with two-pane sash windows, quoining detail and typical double doors with simple fanlights the only testimony to their Victorian origin [See Figure 44].



Figure 44: Office building in Meteor Street dating circa 1890s [Photograph: Philip 2012]

Two official buildings that seem to be of high importance to the town's inhabitants, were also erected in this period. Both of these buildings are situated in Market Square and are therefore a central focus of the town. The original Town Hall was erected in 1896 but destroyed in a fire prior to 1914. The current Town Hall was erected in its place in 1914. The only alteration it has received since then is the addition of a projector room (for screening films) that forms an overhang over the street. The Town Hall was the hub of social life and played an important role up to approximately the late 1990s. Today it is in a very poor condition and seldom used [See Figure 45].



Figure 45: 1896 Town Hall in Market Square [Photograph: Philip 2012]

The second building is the original Town Clerk's offices erected in 1892 which later became the municipal offices. During a public strike in 2009 this building was completely destroyed by a fire when disgruntled members of the town and surrounding townships set light to it [Refer to Figure 53 on Page 86].

Observations on human use of the landscape

With the exception of one day per month there are very few pedestrians during trading hours. There is no loitering either or hanging out at street corners or at the front of shops. The streets are, however, often lined with cars in front of the shops. Observations took place during the summer and usually during the hottest time of the day between 11 am and 3 pm which might explain the lack of pedestrians or evidence of loitering.

Market Day, although no longer referred to as such, coincides with the day of the month when all government grants are paid out, referred to as *All-pay*. On this day hawkers from

various places of origin flood the town to display their wares at the town square. Farmers from neighbouring farms sell meat and livestock and various stalls sell fresh fruit and vegetables that were either farmed at small scale or bought at the market in Bloemfontein and repackaged for sale on this day [See figure 46].



Figure 46: Farmer selling livestock (left) and vegetable stalls (right) [Photographs: Philip 2012]

With only one bank in town the queues start forming early in the morning and as the recipients of the various government grants exit the building with their monthly payment they only have to cross the street to do their monthly purchases at the market. Food stalls selling traditional porridge and *seshebo* (various side dishes) are popular as the food is cheap and most pensioners leave home quite early to get to the bank and need some nourishment for the long trip back home.



Figure 47: The skeletal remains of the municipal offices form a sad backdrop to the festive mood of this important day of the month [Photograph: Philip 2012]

It is, however, clear that the business centre is the hub of activity in Jagersfontein. This is understandable as there are no public parks, no recreational facilities that are in a condition to be utilised, and no cinemas or other places of entertainment in Jagersfontein itself.



Figure 48: Clothing shops put clothes on display to attract their fair share of the consumer market [Photograph: Philip 2012]

Conclusion

Jagersfontein clearly has a unique character formed by its largely historic built environment, and remnants of earlier mining activities. The fame of the open pit mine being the steepest hand-dug pit provides an unparalleled dimension to its uniqueness. The town is suffused in a clearly visible rich and varied history ranging from the more visible signs of the picturesque business buildings in Town Square to less visible remnants of its history such as the old water hydrants at street corners, wide unpaved streets, and even the names of the streets themselves. None of the streets are named after earlier presidents or people of national fame as is frequently found in towns and cities in South Africa, nor would you find a Church Street. Even the obligatory Voortrekker Street that can be found in most towns and cities was named at a much later period (presumably in 1938 with the 100 year commemoration of the Great Trek) and is in one of the most unobservable parts of town, the northern exit along the kloof that leads to the Golf Course and farms beyond.

What makes this town even more unique is that the historic environment dates to a specific

period with very little evidence of the periods following this and only remnants of the preceding period. As Picton-Seymour (1977: 376) so aptly remarks, the built environment is most definitely resonating the hey-day of the town's mining history which was at the turn of the 19th century. The only difference in her observation and this study is that the town contains more than just remnants of this period. Victorian elements such as fretted woodwork, veranda trims, barge boards, gable finials and loft ventilators which are less frequently found in other Free State towns, run like a golden thread throughout the town of Jagersfontein and can be found on the most humble to the most impressive buildings. This lends a specific charm and character to the town.

What is, however, clearly evident is that the town suffers economically. The majority of business premises are well-kept and the combined effect provides a feeling of having stepped back in time. On the downside, however, many residential homes, although neat, are in desperate need of repairs and maintenance. Job opportunities are scarce and the long lines in front of the bank on the day government grants get paid out are a silent testimony to the source of income for a great many of its residents.

The lack of interest in this town on the part of local government is reflected by the poor condition of the municipal buildings. In addition to this municipal services such as rubbish removal are inconsistent with the result that the town looks unkempt in certain areas.

With only one guest house the town is certainly not catering for visitors at any large scale. In addition to this there is only one café offering a limited menu of take-out food and visitors and residents alike have to look to nearby Fauresmith for a proper sit-down meal.

On the positive side Jagersfontein comes across as a reasonably safe town. The lack of excessive security systems on homes reflects that crime is not rife in this town, but the same can be said for the other smaller towns nearby such as Fauresmith and Trompsburg.

In conclusion, the quaint largely Victorian architecture dating to the turn of the 19th century, the unique aspect of its manmade open pit mine, its exclusive history in terms of being the first place in the world where non-alluvial diamonds were found, lends Jagersfontein a character unparalleled elsewhere. What remains to be seen is how much, if any, this inimitable character of Jagersfontein contributes to a Sense of Place with its inhabitants.

CHAPTER 5: QUALITATIVE ANALYSIS AND INTERPRETATION

Introduction

This chapter primarily deals with the relationship between the historic environment and a Sense of Place with the current inhabitants of Jagersfontein. The choice of the population sample is not intended to be representative of Jagersfontein, including the townships. Instead, respondents were selected for their potential to shed light on the specific research problem. Appendix A describes this in detail. In the previous chapter it was already determined that the town has a largely historic character dating to an approximate period of 1890-1914 but at the same time it is also clear that it is a town with few economic prospects for a very large portion of its inhabitants. As a result, many of its buildings are in a poor condition.

Norberg-Schulz (1980: 6) refers to socio-economic conditions as *'a picture-frame [for place]; they offer certain "space" for life to take place, but do not determine its existential meanings'*. By this he means that it does not change the three-dimensional organisation of the elements of place which create a general atmosphere that provides its character. Socio-economic factors do, however, have an impact on the meaning people attribute to places which is according to Gieryn (2000: 472) one of the aspects of Sense of Place. The second aspect he mentions is the legibility of a place which was dealt with in the previous chapter.

As explained in Chapter 3 a phenomenological approach is used for determining if there is a link between the historic built environment of Jagersfontein and its inhabitants' Sense of Place. The visual text created by the observations and analysis of the built and natural environment in Chapter 4 is integrated with the results of the interviews. Where new themes emerge from the latter (i.e. other than those that are covered by the questionnaire), they are investigated and included if they have a deciding impact on Sense of Place.

In order for the results of this research to be comparable to other similar research in Europe, the questionnaire [Refer to Appendix B] used as a guideline for the interviews is based on one that was used in a similar-focused, in-depth study in Britain (Bradley et al., 2009). Interviews took place between 4 and 20 December 2012. The same interviewees were used for both an open-ended semi-structured interview and a short close-ended questionnaire. The latter is used for quantitative analysis of Place Attachment in the

following chapter. This provides the opportunity to compare the results of the two to see whether they inform and support each other.

The current chapter is focused on qualitative inquiry aimed at finding relationships between different elements of the research and reasons behind the values, attitudes, and perceptions that have an influence on the respondents' answers. Through this, it is hoped to gain a more in-depth understanding of the research problem. Any quantifiable data collected during this phase is used in the next chapter to supplement the data collected for quantitative analysis.

What remains to be explained is the broad background to the political history of South Africa and the varied ethnic composition of its people as this is an important variance from the situation in Britain.

Composition of the South African population

According to the 2011 Census data (Statistics, 2012) the total population of South Africa is 51 770 560 comprised of the following population groups:

Population Group	%
Black	79.2
Coloured	8.9
Asian/Indian	2.5
White	8.9
Other	0.3
Total Population of South Africa	100

Table 1: Population group distribution in South Africa

This means that 91,1% of the current population classify as previously disadvantaged under the old dispensation of the Apartheid regime.

South Africa has 11 official languages of which 9 can be linked to the black population group namely: IsiNdebele, IsiXhosa, IsiZulu, Sepedi, Sesotho, Setswana, SiSwati, Tshivenda and Xitsonga. The remaining two languages are Afrikaans and English. As language is one of the potential indices of ethnicity it provides a good indication of the cultural diversity in South Africa, bearing in mind that none of the languages of the Asian/Indian population group that makes up 2,5% of the total population is reflected here. These ethnic distributions,

however, differ from province to province so that a specific group might be dominant in one province but not in another. This can further be narrowed down to differences between different districts within the province and different wards within the district. However, the margins in difference between the latter two can be negligible depending on their distances from one another.

A brief synopsis of the political history of South Africa

As this research is focused on the built environment that is situated in the business area of a previously White township, it is also necessary to provide a brief background to the political situation in South Africa during the time this town was created up to the current situation.

The official Apartheid era [1948-1994]

The apartheid system of racial discrimination and segregation was formalised by the Reformed Nationalist South African government of 1948. The Reformed National Party ('Herstigste Nasionale Party') was formed in a pact between the National Party and the Labour Party prior to the 1948 elections in an attempt to lift the ruling South African Party out of their seat of power. The Labour Party was most instrumental in formalising apartheid as their concerns were focused on safeguarding job opportunities for the white labour force in the country which was of particular importance to them during the period of worldwide depression of the 1930's and the post-World War II period of the late 1940s. However, repression of the indigenous people of South Africa was common practise from the time when the first white people settled in the country in 1652. By 1948 the majority of Africans were already banned from voting and Coloured and Asian/Indian voting power was limited by existing legislation relating to franchise requirements dating to the 1920s. Examples of these are The Class Areas Bill of 1923, The Boroughs Ordinance No 189 of 1924 and The Rural Dealers Ordinance of 1924 which all were aimed at limiting Indian trading.

The Free State Province in particular had two laws dating from the period when the Free State was still one of the two independent Boer republics in South Africa namely:

- The Orange Free State Act 29 of 1890. This law aimed to *"provide against the influx of Asiatics and the removal of White criminals entering the state from elsewhere"*.
- The Statute Law of the Orange Free State, 1891. This law prohibited *"an Arab, a Chinaman, a Coolie or any other Asiatic or Coloured person from carrying on business"*

or farming in the Orange Free State”.

All Indian businesses were forced to close by 11 September of that year. Their owners were deported from the Orange Free State without compensation.

Although similar discriminatory laws against people of Asiatic origin were in place in other provinces during the early history of South Africa, these did not last as long as in the Free State where they were only abolished in 1986. Up to then people of Asiatic origin were not allowed to be in the Free State for a period of longer than 72 hours.

Segregation practices that could have an impact on how previously disadvantaged people view the historic business centre of Jagersfontein today include:

- separate entrances to shops, in particular liquor stores and butcheries where they were served behind a barred counter,
- separate queues at pay points, and
- separate public facilities for Whites and people of colour.



Figure 49: An example of an apartheid sign that was a common occurrence in South Africa. [Source: Wikipedia]

Added to this is the fact that recreational areas and parks in these towns were for Whites only. Very often the surrounding townships had little to no similar facilities. In the Jagersfontein townships this was no different, and although there were apparently tennis courts and one soccer field, there was no swimming pool that would have been a great advantage in an area that experiences extreme high temperatures.

The 1960s saw the beginning of the armed struggle and popular resistance movement against apartheid that led to the banning of political parties such as the African National Congress.

The practice of apartheid continued until F.W. De Klerk took over as State President from P.W. Botha in September 1989. During the same year De Klerk met with the leader of the ANC, Nelson Mandela, and on 2 February 1990 he lifted the ban on the ANC, the South

African Communist Party (SACP) and the Pan Africanist Congress (PAC).

This was followed by negotiations between the South African government and the leaders of black movements that eventually led to the first democratic election in the country on 27 April 1994.

Post-Apartheid South Africa

Looking back over 20 years of democracy in South Africa, the initial euphoria of a freed nation appears to be dissipating and being quickly replaced by severe criticism of the current administration and the way the country is being governed. This is the result of a long process that started with former president Mbeki's replacement of the pro-poor Reconstruction and Development Programme (RDP) with the fiscally conservative Growth, Employment and Redistribution macro-economic programme (GEAR) which served to strengthen the ties between the government and the business sector, and benefited the economy of the country, but paved the way for neopatrimonialism and the establishment of an elite political culture. This has the potential to alienate the poor, unemployed and working-class organisations (Reddy, 2010: 190-191). This is, however, an over-simplified explanation of a process that is in reality very complex and by no means intended as a foregone conclusion of the current state of affairs. Nonetheless, it forms a basis for understanding present dissatisfaction although it is not always clear how widespread the dissatisfaction is as it is mainly expressed by opposition parties and working class organisations, which are not necessarily the voices of the poor. In recent years signs of discontent became apparent in an increase in wildcat (unauthorised) strikes of which those in the mining industry had, and continue to have, the greatest impact on the South African economy. These are clear signs that people no longer trust the formal structures in place (government approved worker's unions) to deal with dissatisfaction but are starting to take matters into their own hands. The poor handling by the police of the now infamous Marikana strike (a platinum mine close to Rustenburg in the Northwest Province of South Africa, owned by the London-based Lonmin company) in 2012 that resulted in the loss of 44 lives and more than 78 injured, has further incited the labour force's dissatisfaction with the government.

At the same time, municipal strikes have increased drastically over the past five years and

have become a regular occurrence throughout the country. Municipal strikes have a direct effect on the quality of life of people in towns and cities as service delivery comes to a standstill during these times. In a domino effect public strikes occur against poor service delivery by government sectors. It was on account of poor service delivery that a public strike against the Jagersfontein municipality resulted in the torching of the municipal offices in July 2009. However, it should be borne in mind that the majority of strikes in the country are mainly focused on wages that are not keeping pace with inflation. People are finding it increasingly difficult to maintain an acceptable standard of living.

In addition to this there is widespread public dissatisfaction with the cronyism, nepotism and corruption associated with the current leadership of the ANC and the perception that only a select few are benefiting from outsourced government contracts in the various sectors (Bekker and Van der Walt, 2010: 141).

These are factors that have an effect on people's Sense of Place and should be kept in mind with the analysis and interpretation of the research results.

The remainder of this chapter is divided into two sections. In the first section the life-worlds of individuals are interrogated by means of in-depth semi-structured interviews and observations to determine each one's Sense of Place. This is followed by a discussion on the role the historic environment plays in the establishment of these Senses of Place.

Sense of Place

Yan Xu (1995) describes Sense of Place as *'defining oneself in terms of a given piece of land'*. However, it is a complex phenomenon with many interactive parts that cover the full range of the life-world of the individual, from the physical environment to the less tangible socio-economic world. To further complicate the concept of Sense of Place different disciplines have different research foci according to their disciplinary perspective. In a holistic and interdisciplinary approach, however, it is necessary to take note of all the various dimensions of Sense of Place as recognised by the individual disciplines as each of them address specific aspects that together form the life-world of the individual. Ardoin (2006: 114) has identified the following four overlapping interactive dimensions of Sense of Place that consistently occur in all the various fields of research and which will form the framework for the analysis of the data collected via interviews and observations in this

paper:

- the biophysical environment which provides the context,
- the personal/psychological element which focuses on the individual,
- the social and cultural context with its wider focus of society and culture, and
- the political economic dimension.

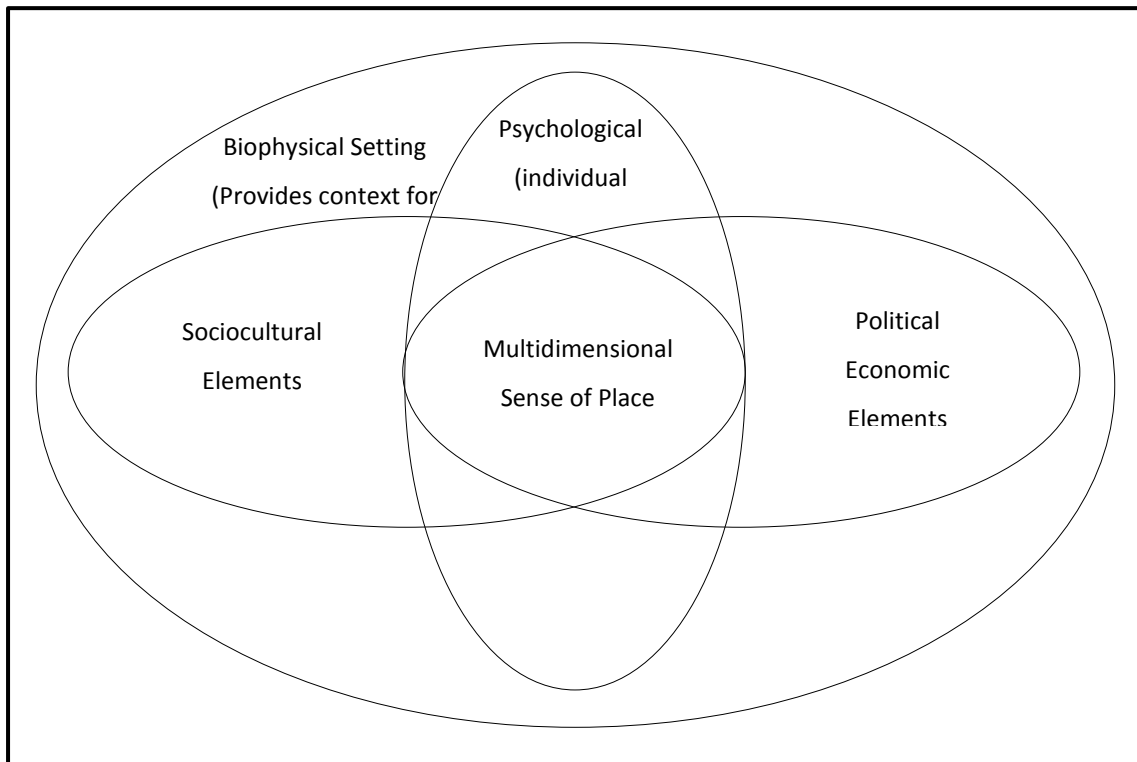


Figure 50: Dimensions of Sense of Place (Ardoin, 2006: 114)

The Biophysical setting

The biophysical setting includes both the natural environment and manmade structures that make up place in space. It has its own history that shaped it to what it is in the present-day and gave it a particular character. Massey (1995: 183) points out places '*are always constructed out of articulations of social relations*'. It is the setting where life occurs and forms an integral part of our existence.

Chapter 4 gives a detailed account of the history of Jagersfontein and, as mentioned, provides the visual text to aid an understanding of the biophysical setting of the current study.

Central to place and a person's life-world is the individual's home (Relph, 2009: 26). From

this point our life-world extends in concentric circles to immediate neighbours, to the neighbourhood, to town, to natural surroundings, to region, to district, to province, to country and finally the global world.

Psychological Dimension

Taking the lead from the fields of Environmental Psychology, Community Sociology and Human Geography this dimension can be broken down into Place Identity, Place Dependency, Place Attachment and Place Satisfaction which are all results of the individual's interaction with biophysical spaces.

Place identity is a sub-structure of self-identity (the values, attitudes, feelings and beliefs of an individual) and deals with the affect that the environment (place and space) has on the forming of self-identity. Neither one is stable as events and changes in the life-cycle of an individual constantly redefine self-identity. Likewise changes in the environment through human interaction and natural forces redefine place-identity and consequently have an influence on self-identity (Proshansky et al., 1983: 59).

At the same time, however, it should be pointed out that changes can be very gradual and not immediately evident especially if there be sufficient elements of continuity not to have a huge impact on a person's life-world (Kneafsey, 1998: 114). These changes are gradually absorbed, and adjustments to these are made at small-scale levels. A good example is the natural process of aging. For a person, it could be changes in the body like failing eyesight which can be adapted to by means of spectacles. A building might undergo small changes as older sections such as railings are replaced by newer ones. Drastic changes, however, such as the death of a loved one or in the case of Jagersfontein the closure of the mine have a profound effect on identity. At a personal level, a person has to redefine his or her identity as a widow or widower. In the same way one could ask whether a town can be a mining town without an operational mine? Bearing in mind Peet's (1998: 10) reference to places as '*locales in which people find themselves, live, have experiences, interpret, understand and find meaning*' [as quoted in Kaltenborn and Williams (2002: 190)], such a drastic change in the town's life would have a profound effect on its remaining inhabitants. They would have to renegotiate their relationship with the town which can result in a completely new place-identity.

Few of the current residents of Jagersfontein, however, have any memory of these events as the mine closed down over 40 years ago. Many of the mine's employees at the time were transferred to one of the other De Beers-owned mines. The few that chose early retirement have long since passed on.

A second large-scale event that had an effect on the town and its inhabitants is the end of Apartheid. The immediate effect was that the town was no longer a Whites-only residential area. The second census recording after Apartheid took place in 2001. By this time, two thirds of the town's residents were people of colour. Living together in one town, however, does not necessarily mean integration of the various population groups. Few of the respondents referred to people outside their own population group as part of their social network.

Identification with home is very strong with all respondents. The reasons for this include aspects such as location (close to nature; close to the town), emotional ties (born and raised there; many previous generations lived there; husband or wife died there), atmosphere (peaceful and quiet), safety (neighbours are policemen; quiet street safe for children), social (close to friends; close to the church), quality (big house) and one respondent simply stated '*because I like it*'. Whatever the nature of their attachment, all indicated they want to live nowhere else in Jagersfontein (including townships) which is an indication of the strength of the bond with their homes.

Place Dependency refers to the degree to which the physical environment supports specific activities that an individual might view as important for his or her well-being (Williams and Vaske, 2003: 831). Examples of this can be sport facilities, recreational areas, community centres, public parks, and so forth.

Jagersfontein has little to offer in this regard, but this was not always the case. The change, however, was gradual and occurred over a period of twenty years so that people who have lived there since the earlier years gradually adapted to the situation. Churches seem to have taken over as social centres. Most respondents made some mention of church activities although they were not explicitly asked about church involvement. This, however, has fragmented the residents into different church communities whereas communal recreation areas and sport facilities would have provided the opportunity for

more integrated social interaction.

Of the 15 people interviewed, Respondent A mentioned that the shops are limited in the range of goods they sell and that it is not as it used to be in the 'old days' when these shops provided all their consumer needs. Respondents D and F said they miss the parks and that they used to enjoy going there. Respondent J (26 years old) said there is no place where young people can go to socialise.

The absence of places to socialise is accentuated by the fond memories respondents recalled of activities from the earlier years, when the town still had these facilities. The yearly Masonic Ball in the town hall was one of the highlights of the year. Going to the movies on Wednesdays and Saturdays in the town hall, picnicking at Woolwash Dam, swimming, playing tennis, horse-riding, going out for dinner at one of the restaurants, are activities fondly recalled.

Interesting is that two respondents, one Black and one White, lamented the fact that shops do not smell the same anymore. This indicates the sensory level of experience that is often sub-consciously registered, but can bring back vivid memories when experienced again later in life. This is often related to a period when there was greater specialisation in shops as opposed to the general dealer shops found today. Haberdashery shops, butcheries, bakeries, greengrocers and so forth all have a specific smell associated with the product they sell. Another respondent recalled a childhood memory of the smell of the bakery that drifted through her neighbourhood late at night as the bakery prepares the next day's batch of fresh bread, buns and pastries.

Although the facilities mentioned above were accessible to White residents only, the Black and Coloured respondents had equally fond memories of the 'old days' but for different reasons that will be discussed later. Mention was, however, made of playing tennis and watching soccer matches.

A lack of safe places for children to play was specifically mentioned by those respondents who have young children in their care.

From the responses of the interviewees, it can be surmised that there is in general a very low level of place dependency if only activities are taken into consideration. Only one

respondent mentioned his involvement in his church as a reason for preferring to stay in Jagersfontein. Another respondent who referred to her church as *'a happy place'* and *'a very positive centre for social and other needs'* is the only person who indicated she prefers to live elsewhere (in another town). It is, however, indicative of a strong dependency on the church as place to satisfy some of her needs.

The odds change dramatically if aspects such as location of residence and general atmosphere are added to the equation. Respondents E and K indicated that the peace and quiet of the town are important to them. Respondents C, D, F, H, and I mentioned that the close proximity of their homes to the business centre is important to them. All of them live in the sections of the locations closest to town or in the town itself. The main mode of transport for these respondents is walking, not necessarily by choice but simply because they do not own a car and/or cannot afford the expensive taxi rates. As they can only buy what they can carry, these people are forced to make more trips to town than the person who owns a car and can purchase a month's groceries in one trip.

The largely pedestrian nature of the inhabitants of Jagersfontein and townships has found its way into the local vernacular. Two of the respondents referred to people as *'voete'* (feet). Respondent M used it to indicate the lack of a sufficient workforce for the local municipality to be fully efficient by saying *'hulle het nie die voete nie'* [*They don't have the feet*]. Even more indicative of this is a double reference to the pedestrian nature found in a comment Respondent J made regarding the lack of young people her age in town: *'al die jong voete het weggeloop'* [*all the young feet walked away*], i.e. they moved away from Jagersfontein.

In conclusion, there is a strong Place Dependency with all of the respondents. To some it is the natural environment, to others their homes, and to only two respondents physical structures other than their homes, the church.

Place Attachment Place Dependency is often viewed as the functional element of Place Attachment, with Place Identity viewed as the emotional element. Strong emotional bonds with a home can result in a strong attachment to it (Giuliani, 1991: 134). A strong place dependency can strengthen these bonds. The results of the analysis of these constructs in the current research confirm this.

Place Attachment, however, is more than just the combined effect of these two elements (Ardoin, 2006: 115). Hidalgo and Hernandez (2001: 274) define Place Attachment as an affective bond between people and places, strong enough to desire to stay close to it. As such, it is a source of comfort and security in its familiarity. It can, however, also evoke strong negative feelings such as sorrow or anger when the object of their affection is endangered.

While the length of residence is not necessarily a prerequisite for strong place attachments (Kaltenborn and Williams, 2002: 191), people who have spent a large proportion of their lives in a specific environment do show stronger attachments to places than those who have spent less time there (Hay, 1998: 7). Rubinstein and Parmelee (1992: 139) ascribe this to emotional life experiences that create a specific bond with a place. This has also been described as *rootedness* and *bondedness* where the former refers to length of residence and the latter to feeling part of a place (Hay, 1998: 6).

Though the reasons vary, all the respondents display a strong Place Attachment. With some it is implied (26-year old Respondent: *'I want to raise my children here, and I want to retire here one day'*) and with others very explicitly stated such as *'this is my home'* or *'I wouldn't be able to live anywhere else'*. With the 26-year old who has lived there for only two years, it is a forward projection of expectation. To the older respondents it is a backward reflection on the emotional ties that were formed such as *'I was born and raised here'*, *'my children were born and raised here'*, *'my friends and family are here'*, and so forth.

Place Satisfaction in a nutshell is the quality of the environment and closely related to public service delivery (Guest and Lee, 1983: 164). With the exception of one respondent, who incidentally is in public service, all respondents showed strong dissatisfaction with the level of service delivery in Jagersfontein and its townships. As none of the residents indicated Jagersfontein as an unsafe place in terms of crime, this excludes police services. The main focus is on the local municipality. Poor maintenance of roads and municipal buildings and poor service delivery in terms of refuse removal are the main complaints. It is in their descriptions of the effects of these that the strong attachment to their environment and specifically the historic built environment is most evident. Strong emotions such as shame, sorrow and anger are indicative of strong ties. Respondent F says the poor condition of the

Town Hall and remains of the municipal building and its adjacent market shed, make her feel very sad. When asked if she feels they should rather demolish those buildings than fix it she replied, *'no, they must fix it, it is our inheritance'*. Respondent H expressed shame in the condition of the town. Her concern that people would think she lives in a dirty town indicates that she experiences this shame at a personal level. Cleanliness is a very important personal value with this respondent and she gets up at five every morning to clean her house from top to bottom. She rarely leaves her house and goes to Town Square just once a month, so this was the only indication that she regards the larger environment as a reflection of her own identity, i.e. a strong sense of place identity.

Respondent M commented that it is more the irregularity of service delivery that is a problem than no service delivery at all. Residential refuse is seldom collected on the appointed day with the result that it can sometimes sit on the pavement for days on end providing dogs the opportunity to rip the bags apart. According to him residents add to this problem by dumping their home and garden refuse in the canal but he feels it is the municipality's responsibility *'om hul vas te vat'* (to take action against them).



Figure 51: Household rubbish dumped in the canal (left) and in an open ditch (right) in town. [Photographs: Philip 2012]

It is evident by a comment made by a respondent living in Mosenthalville that the appearance of the town is also of importance to those living in the townships. In Black and Coloured communities funerals are widely attended, and people will travel far to pay their

last respects even if the deceased was a mere acquaintance. Respondent G said that people who came from another town and approached the township from the west, i.e. they travelled through the town, asked her *'So, waar is julle dorp?' [So, where is your town?]*. When she replied that they travelled through it they replied with *'Daai plek met die sleg paaie? Dis dan soos 'n plaas!'* *[That place with the poor roads? It is like a farm!]* Strangely this is a kick-back from the years of Apartheid where towns were in general pristine but their black and coloured townships were often neglected. Residents of the townships placed their pride in the associated town rather than their own neighbourhood. This is confirmed by several statements similar to that of Respondent G who said *'Onse dorp was altyd baie mooi. Dit was skoon en netjies met mooi paaie en mooi geboue en die parkie met sy fonteintjie was tog so mooi. Ek wens tog so hul wil daai fonteintjie weer laat werk en weer mooi blommetjies om hom plant.'* *[Our town used to be very pretty. It was clean and neat with nice roads and buildings and the park with its fountain was very pretty. I so wish they would fix that fountain and plant pretty flowers around it again.]*

Only one respondent indicated that the level of service delivery has degenerated to such a low standard that she no longer wishes to stay Jagersfontein.

Lack of public transport also has an impact on quality of life. Ironically it strengthens place dependency for those living within walking distance from the business node of the town. The majority of inhabitants of the townships do not own cars and have to walk wherever they wish to be. This is particularly problematic for the aged, the infirm and very young children. Traffic is, in fact, one of two safety aspects that are a concern to several respondents. In spite of the fact that the vast majority of the population of Jagersfontein and its townships travel on foot the environment is not conducive to walking. There are no pedestrian crossings and pedestrian sidewalks are virtually non-existent. In addition to this, the townships of Mosenthalville and Itumeleng have virtually no traffic signs. Traffic control services are non-existent.



Figure 52: Broken rail over bridge over canal that leads to Itumeleng [Photograph: Philip 2013]

The second safety issue can also be linked to pedestrian safety and concerns the open canal. It is not fenced in, and the broken rail on the bridge crossing the canal between Itumeleng and Mosenthalville has yet to

be fixed [See Figure 52]. Complaints on lack of maintenance of municipal property are at the same level as complaints on poor service delivery. There is, however, substantially stronger emotive value attached to the results of the former than that of the latter. All the respondents pointed out either the Town Hall [Figure 54] and/or the burnt down municipal building [Figure 53] as buildings they like, and would like to see restored and preserved.

Here, once again, a strong sense of identity with the town is expressed by a respondent living in one of the townships. With particular reference to the burnt down municipal building, she said *'Sies man, wat se soort mense sal ander dink bly hier?'* [*Sis man, what kind of people will others think live here?*] The 'others' referred to are strangers who pass through the town and the implication is that people will not want to stop and explore the town if this is what they see standing in Town Square.



Figure 53: The burnt-out shell of the municipal building that was torched during a public strike against poor service delivery in 2009. This building dates to 1896. [Photographs: Philip 2011]



Figure 54: The Town Hall dating to 1914 with detailed views below of the signs of neglect on the exterior surfaces and the fire damage on the inside. [Photographs: Philip, 2012]

Poor maintenance also has a direct effect on place dependency as public facilities in terms of recreation and sport were closed down on account of this. The required structures to support these needs are, therefore, no longer in place. During 2011 the pool was renovated as part of Free State Premier Mr E.S. (Ace) Magashule's Operation Hlasela⁶ [Figure 55]. In the process, however, a valuable part of the history of Jagersfontein was eradicated when the original entrance and row of changing rooms were demolished without permission from the Free State Provincial Heritage Resources Authority [See Figure 56]. Although the complex was in a poor condition, it was still the original material from the early 1940s. According to the interviewees (Respondents A, M and N) maintenance on this complex stopped during the late 1990s and the facility soon became totally unusable.

⁶ Project Hlasela, a Free State Provincial Government initiative, was launched in December 2010 as the provincial government's flagship service delivery programme with promises of jobs, RDP houses, land and infrastructure to poor and unemployed people.



Figure 55: Renovation of the new pool complex in process with the pool already completed and a new fence erected. On the right is a view of the poor condition of the netball - and tennis courts. [Photographs: Philip 2011]



Figure 56: Original entrance to the pool area on the left with on the right a view across the pool with the changing room and bathroom facilities in the background and the stand on the left. This complex dates to \pm 1940 [Photographs: Philip 2009]

These are by no means the only signs of lack of maintenance. The Jagersfontein Municipality Community Service Centre [Figure 57] dates from the period when Jagersfontein had its own municipality, i.e. pre-1998 before it was incorporated into the new Local Municipality of Kopanong, and is situated at the corner of Kerr and Meteor Streets in Town Square [Refer to Appendix J for map of Jagersfontein.] Its empty interior, broken windows and missing doors are silent testimony to both lack of service delivery and lack of maintenance from local government.

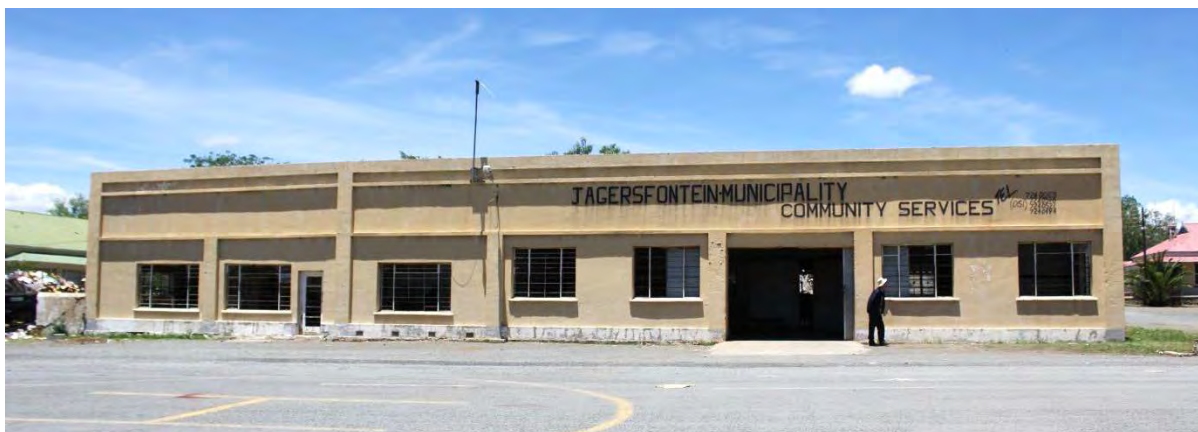


Figure 57: Municipal community services building in Town Square – unknown date of construction [Photograph J visser, National Museum, 2012]

Place Satisfaction certainly seems to have an influence on people's Sense of Place in Jagersfontein. What is difficult to determine is whether this is a positive or negative influence, i.e. does it strengthen the bond or diminish it? If a loved one becomes sick, it does not weaken a person's feelings towards that person. On the contrary, one would become more protective, so it is the nature of the bond that changes, not the quality of it. People might not even have been aware of the affective feelings they have for these buildings, until the compound effect of years of neglect become apparent. This is confirmed by the fact that most of the other old buildings in Town Square were mentioned as buildings the informants like, but it is these two municipal buildings standing in the midst of them that elicited the strongest emotion.

Poor service delivery and maintenance can also alter people's perception of the past. In studies on Place Attachment in the work environment and with home movers (Giuliani, 1991: 134) it was found that the disruption of change from a familiar environment to a new, unfamiliar environment can suddenly make a person see the old house or place of work in a more favourable light; that previous job was not quite so bad or that old house not quite so unsuitable as they thought. A similar effect is found in the present study with older people's perception of Apartheid. The current poor service delivery, as well as poor economic situation, encourages respondents to make comparisons between life now and life as it was then. Childhood memories of Black and Coloured interviewees reflect back on a time when the town was pretty, and life was affordable. When pointed out that they refer to the Apartheid-era they insist that life was much better than what it is now. These are, however, all elderly people and reflection on the past can be compared with having tunnel vision.

They remember what was and not what could have been, so the missed opportunities that an unequal educational system created are not taken into account by these interviewees. It is the quality of life now that counts and at their advanced age there is not time to wait for life to turn better again.

The conclusion, therefore, is that Place Satisfaction with the population sample of Jagersfontein is very low, but it brought greater awareness of the built environment, with specific emphasis on those aspects they previously took for granted.

Sociocultural Dimensions: Society and Culture

The sociocultural dimension is integrated into this study from mainly the sociological and anthropological perspective (Ardoin, 2006: 116). It was already briefly mentioned that non-segregated neighbourhoods do not automatically equate to integrated communities. To a large extent this phenomenon can be ascribed to cultural differences. People tend to be naturally drawn to those who share a similar culture. An extreme example of this can be found in Jagersfontein where the few Chinese shop owners and their families have formed a close and closed community of their own. Pertinent questions to the respondents regarding any possible relationships with Chinese people were met with answers like *'nee, me, hulle stap maar so saam hul se eie mense'*. Directly translated this means they walk with their own people (once again a colloquial reference to the pedestrian nature of the town), but actually means they only mingle with their own people. Some of the respondents were more explicit in their opinions and criticised the fact that the Chinese residents *'contribute nothing'* to the town; *'they don't employ local people, they don't purchase local goods, they don't pay taxes, all they do is take.'* It is not clear on what the assumptions about non-payment of taxes are based. To a large extent the exclusivity of this community can be ascribed to the fact that all of them are new immigrants to South Africa and know very little English. To them this is a foreign country in every sense of the word; in terms of the environment, the people, the customs, and the languages. It is, however, natural for people with similar cultures with established shared values to stick together when they find themselves in a new country, and it is a common occurrence among immigrants all over the world. Sense of Place with first-generation immigrants is still strongly connected to their homeland (Shuwera and Fitzpatrick, 2009: 123) and sticking together creates a mini version

of that in their new place of residence.

This, however, emphasises the importance of social networks in a person's life-world. It is hypothesized that there is a mutual reinforcement between Social Capital and Place Attachment or Sense of Place (Forrest and Kearns, 2001; Bradley et al., 2009). Social Capital in the current study was measured in terms of number of family members living close by, number of friends living close by, and number of respondents felt they could call on in a time of emergency.

Four respondents said they have no close friends in their immediate vicinity, but all four of them have quite an extended family network. Two of them do not have friends in other areas of Jagersfontein either, whereas the other two have quite an extended circle of friends in their old neighbourhood, Red Location or Old Stands as it is also referred to. Four of the six respondents who reported having two or less family (counted as number of households) living close by (which included those sharing the home with them), have an exceptional large circle of friends which ranged from a minimum of eight to the '*whole neighbourhood*'. One reported having only one good friend and another that she has only two friends in her immediate area, but many in Itumeleng. This seems to be an indication that fewer family equate to a larger circle of friends, alternatively vice versa, so the pattern with the remaining five could either confirm or refute this possibility. Unfortunately, four of the remainder five have both a large family support structure and a large circle of friends, with the fifth being the exception in having only one friend, which means that a large family support structure does not necessarily equate to a smaller circle of friends. It should, however, be mentioned that the last respondent has been in Jagersfontein for only two years, and on top of that there are few young people her age in her area that she could befriend.

Only one out of the 15 respondents, therefore, has very weak Social Capital with only one family member (living with her) and only one friend. At the same time, it should be mentioned that her responses to other questions create the impression of enjoying activities related to nature more so than to people. Similarly in answer to Question 20, which asked if the respondents could point out which area/building/place they like best in their neighbourhood, she immediately mentioned a kopje (low hill) close to her home. She

likes the view from up there.

Fourteen of the fifteen respondents, therefore, have reasonably strong social bonds in either friends, family or both. Social bonds other than family are in general gender specific and often also age specific. In the latter, it can be to the point of exclusion, especially of younger age groups, as Respondent G's response indicated. Without prompt, she said she has no young friends and she doesn't want them either. *'Ek soek nie hulle se probleem nie. Hulle groet my net, more Ouma, hellow Ouma, dan sê ek nee, gaan maar verby, more, ek is nog orraait. Jy sien nou as ek werk is ek orraait.'* [I don't want their problems. They just greet me and say good morning granny, hellow granny, [she refers to when young people walking by stop to greet her when she is outside sweeping her yard] then I say, no, just keep on going, I am still fine. You can see I am working so I am fine.] It was not possible to ascertain whether social bonds were culture specific or not as the townships of Itumeleng and Mosenthalville are still highly segregated with Coloureds living in Mosenthalville and Blacks in Itumeleng, with exceptions on both sides. Respondents were asked to name close friends in their area and it does, therefore, increase the possibility that the person is from the culture that is prevalent in that area. In Jagersfontein, however, the social bonds are clearly culture specific with Whites indicating Whites for their social circle irrelevant of the area in which they live.

What was very evident is that there seems to be an exceptionally strong neighbourhood bond in Red Location. Both the two respondents who live there, as well as two more respondents who used to live there, speak of them all being like one big family. The two respondents living there are then also two of those who indicated the whole neighbourhood as their support structure (someone you can call in need). Everyone knows everyone and everyone helps everyone. One can talk of a very strong spirit of Ubuntu among the residents of this neighbourhood. Ubuntu is a very old southern Africa word that in essence means togetherness or a moral quality according to which persons are interconnected. Lovemore Mbigi states that *'the heart and soul of ubuntu 'is the solidarity principle, group conformity and care in the face of survival challenges, based on unconditional group compassion, respect, dignity, trust, openness and cooperation'* [as quoted in Swanepoel (2008: 360)] This is on average a very poor neighbourhood with the only facilities an outside

flush toilet with basin and tap attached to its side. The houses are closely spaced and range from the old original red clay buildings [Figure 58 left], some modified to have a more modern appearance, to make-shift shacks constructed of sheets of corrugated iron [Figure 58 right].



Figure 58: An example of the two poorer types of dwellings that can be found in Red Location. The house one the left most likely dates from the 1870 - 1880s [Photographs: Philip 2012]

Although Lewicka (2005: 382) states that a strong emotional attachment to place in impoverished areas might be '*a result of the absence of life alternatives, as opposed to some form of conscious choice*', most of the residents here are eligible for Reconstruction and Development Programme (RDP)-housing yet many prefer to stay in Red Location. (Any South African citizen with a total combined household income less than R3500 per month is eligible to apply for an RDP-house.) Those who have moved away still have much stronger bonds with Red Location than they have with their new neighbourhoods. Many houses in Red Location have seen several generations of the same family, and form part of the reason for the strong bonds people in this area have with their homes. It also provides a sense of pride to be the descendants of some of the earliest inhabitants of Jagersfontein and therefore a sense of history and ownership of Jagersfontein.

In conclusion, social relationships appear to be culture-specific with the White population, and gender-specific with the Black and Coloured communities. With the exception of one, all other respondents have strong Social Capital, which has a positive influence on their Sense of Place.

Political Economic Dimensions: Place-based involvement

Manzo and Perkins (2006: 340) point out that *'the political aspects of place and place attachments are illustrated in communities that have been empowered or disempowered....in response to environmental problems.'* According to them, strong Place Attachments can serve different sectors of the community combining their strengths via a partnership approach to rectify these problems and re-empower themselves. An example of this can be found in the nearby Fauresmith, where residents stood together and approached their local municipality to provide them with the necessary equipment so that they could clean up the town. Not only did it result in a cleaner town, but also established a positive relationship with the local municipality which resulted in better service delivery (pers. com. Dina Smit 2009).

With the re-organisation of the municipal structure into local, district and provincial levels, local municipalities lost their previous autonomous status. Any weak link in the new chain of power means that lower levels suffer, and often the weak link is at district level. Budgets for the individual local municipalities within a district are decided at district level, and similarly district budgets within a province are decided at provincial level. Districts that fall in low economic areas consequently receive a lesser cut of the provincial budget, and this is filtered down to local municipalities. The main consequence of this is available manpower for individual municipalities, and without available manpower service delivery is near on impossible. This forms the crux of the problems regarding service delivery in Jagersfontein that in turn affects the quality of residents' lives.

A further problem with the current municipal structure is that political appointments are made in positions of power. This does not always equate to the ability to do the job. Mismanagement due to lack of required skills for the job thus compounds the problem of low budgets.

Jagersfontein might have to take a page from their neighbouring town's book to solve their own problems regarding service delivery. In terms of maintenance, which is a much larger problem, it would depend on the available finances of the local municipality, as well as the necessary skills base, to achieve any positive results. Speculation on this, however, does not fall within the scope of this paper.

At an economic level, Jagersfontein is not in a good position. Job opportunities are largely limited to the few businesses in town, and the new mining operation of recovering diamonds from the mine dumps is not labour intensive and benefits only a few local families. Churches have stepped in to alleviate some of the economic pressures by means of job creation via a recycling project, as well as the distribution of food parcels to the most needy over the December period (the new mine company has contributed to this). Although the recycling project serves in re-establishing a sense of self-worth with the workers, it is not sufficient to make a difference to the economy of the town.



Figure 59: Recyclable material being sorted according to type (left) and sorted material ready for dispatching (right) [Photographs: Philip 2012]

The state of the economy also has an adverse effect on people's choices about whether to stay in Jagersfontein or not. Respondent A, who indicated she no longer wishes to stay in Jagersfontein, mentioned that the price of housing in Jagersfontein serves as a trap for those who live there. The price they can get for selling their property will not buy them a similar quality property elsewhere, and so they have no choice but to stay in Jagersfontein.

There is, however, some hope as the Community Trust that was formed as part of the conditions of sale of the mine dumps to its new owners now has R20 million which is intended for job creation and upliftment of the community. The example for this has already been set in Jagersfontein by Glaas Studio, which trained locals in doing various forms of glasswork combined with wire-art. These products are fortunately not reliant on local tourism as its owner actively markets the products at home fairs all over the country. Some of their key customers are in the curio and décor market as well large corporates for custom-made company gifts. Although these products can be classified as luxury goods, it

has provided a steady income to keep the business afloat and its workers in employment. Skills transfer is an important aspect of job creation so that employees can be employed elsewhere or open up their own businesses should they wish to do so.



Figure 60: The range of products demonstrate a successful marrying of traditional African art with the more classic form of stained glass art. [Source: <http://www.encounter.co.za/glaas-studio.html>]

The following quote from the Glaas Studio website is an example of how a Sense of Place can be expressed in an economic venture:

“The colours, moods and shapes of the savannah grasslands, volcanic koppies (hills) and vibrant sunsets that surround us, inspire each handcrafted wonder. Each item is handcrafted with care and attention to detail, using wire, beads, stained glass, or a combination of the three.” [<http://www.encounter.co.za/glaas-studio.html>]

In summary, the psychological and sociocultural elements are sufficiently strong to have created a moderately strong Sense of Place with the respondents in the population sample, but political and economic elements pose a threat to its stability.

Connection between Sense of Place and the Historic Environment

As the degree of a Sense of Place has been established with the population group, what remains to be determined is to what extent the historic environment contributes to this. Through the process of determining whether the interviewees have a strong connection with Jagersfontein or not, two historic buildings that elicited strong emotions have already been identified. Although these two buildings, the Town Hall and skeletal remains of the municipal building, could equally well have become the monuments of poor service delivery and maintenance, the emotions they evoke speak of attachment at a deeper level. None of the respondents wants them removed; they want them fixed and in the case of the

municipal building they want it rebuilt exactly as it was before.

In the course of the interviews other buildings were also mentioned but not with the same depth of emotion as the former two. Particular buildings that were mentioned include a collective group of 'all the buildings in Town Square and Meteor Street', a collective group of 'all the churches', and individual buildings such as the Dutch Reformed Church and the Roman Catholic Church were also singled out. [Refer to Appendix I for map of Jagersfontein.] These together with the former are, incidentally, the buildings that lend Jagersfontein its historic atmosphere dating from the 1880s – mid-1910. All these buildings, however, are in a reasonably good condition, at least on face value as the Roman Catholic Church dating to 1881 is in a very poor condition inside. The reasons for liking them ranged from being 'pretty' to lending a historic character to the town that they like. It can only be guessed that if a similar fate befalls them as did with the Town Hall and other Municipal Buildings, equally strong emotions will be elicited.

It does, however, need to be pointed out that the majority of the interviewees listed the buildings in Town Square and Meteor Street as a unique aspect of Jagersfontein.

All respondents were asked if they would like the old buildings to be replaced with more modern and larger shops and all of them indicated that they want them to stay as they are, but perhaps with more variety in the range of goods they sell. It was in reply to this question that one of the Black respondents, an 82 year old lady, answered that it must stay as it is because it is their inheritance. The word she used, however, was 'erfporsie' which translated to English is 'inheritance', yet in Afrikaans means a personal inheritance.

As if to add weight to the importance of their historic buildings, five of the interviewees pointed out four buildings other than the old Bank of Africa as Baker designs; the Town Hall dating to 1914, the burnt down municipal building dating to 1892, and the current Standard Bank and the shop next to it, both dating to between 1908 and 1914.

Other historic elements of the town that were mentioned include the open pit mine that is no longer accessible to the public, and the old water hydrants at the street corners. The importance of the open pit mine is deduced from the fact that it was mentioned when respondents were asked to name anything they think makes Jagersfontein unique. It is not strange that it was a topic that was not embroidered on and in fact avoided for the

remainder of the interview. The current mine owners have put in an application with the South African Heritage Resources Agency (SAHRA) to fill up the open pit mine with the reworked soil from the dumps. A section of the community (Jagersfontein, Mosenthalville and Itumeleng) has lodged an appeal against SAHRA's decision to grant the permit. The decision to grant the permit was based on the mining company's reports of the instability of the open pit mine, and consequently the danger it poses to the community. This is, therefore, a sensitive topic that residents are not comfortable discussing with outsiders. The remaining historic features are, however, sufficient to make a case for a moderate to strong role that the built environment plays in the establishment of a Sense of Place with the respondents.

Concluding comments

This chapter had two aims. First was to establish the level of Sense of Place among the population sample by employing constructs that are found in a variety of disciplines, to represent the totality of the human life-world. Second was to determine the role the built environment, and in particular the historic built environment, plays in the establishment of a Sense of Place amongst the individuals interviewed.

It was found that people's homes and neighbourhood play an important part in the establishment of a Sense of Place. There is also strong evidence for the role that social networks play in the establishment of a Sense of Place. Threats to certain historic buildings highlighted the role that the historic built environment plays in people's Sense of Place and is an indication of a potentially strong link between these two elements that form the crux of this research. The current economic and political factors, however, pose a threat to both Sense of Place and the historic built environment.

CHAPTER 6: QUANTATIVE ANALYSIS AND INTERPRETATION

Introduction

In this chapter Sense of Place is investigated through quantitative inquiry of data obtained by means of a close-ended questionnaire that was completed by the same interviewees used for the qualitative inquiry. Quantifiable data collected through the in-depth interviews that formed the basis for qualitative inquiry are included to provide a broader basis for analysis. The results are statistically described and interpreted in terms of the strongest component of Sense of Place, namely Place Attachment.

It should further be pointed out that the questionnaire is focused on determining the degree of attachment that each interviewee has with their neighbourhood and is, therefore, not intended as a direct testing of his or her attachment to the historic node of Jagersfontein that forms the crux of this study. Instead, the link between Sense of Place and Place Attachment is discreet in that if the qualitative analysis indicates that interviewees view their historic built environment as 'home', i.e. as having a personal meaning to them, then a direct testing of level of attachment to their physical home area via a quantitative analysis will either negate or confirm this. The rationale behind this is based on Relph's (2009: 26) finding that the individual's home is central to Place in that person's life-world. The immediate surrounding area should, therefore, have the strongest indication of Sense of Place.

Purpose

The purpose with adding a quantitative aspect to the study is twofold; to test if the results support the results of the qualitative findings, and to obtain a deeper understanding of the phenomenon Sense of Place than might be achieved by one method alone.

Method of data collection

Data was obtained in a cross-sectional survey during the period 4 to 20 December 2012. The survey for quantitative analysis is based on psychometric scaling developed and tested by Williams and colleagues (Williams et al., 1995), and for the purpose of this research simplified to a 3-point Likert scale. As mentioned in Chapter 3, simplified scales are usually used for children but the possibility for confusion is equally high when interviewing people

in a language that is not their home language and where different meanings could be attached to the choices available on a five-point or higher scale.

Determinants for level of Place Attachment

Each answer to the close-ended questionnaire was assigned a weight as follows:

Question	Agree	Disagree	Not sure
a) The area where I live means a lot to me	1	-1	0
b) I could be equally happy living somewhere else	-1	1	0
c) I really feel I belong to my area	1	-1	0
d) I would rather live elsewhere	-1	1	0
e) I am proud of where I live	1	-1	0
f) I am interested in the history of my area	1	-1	0
g) I care about what my area looks like	1	-1	0

Table 2: Assigned scores for each answer of the close-ended questionnaire

The weight for each answer was as follows:

Neutral answers: 0

Positive answers: 1

Negative answers: -1

The highest score that can be obtained is 7 and the lowest -7.

The strength of Place Attachment (PA) is expressed as follows:

6 – 7 : Strong Place Attachment (S-PA)

4 – 5 : Moderately Strong Place Attachment (MS-PA)

2 – 3 : Moderately Weak Place Attachment (MW-PA)

0 – 1 : Weak Place Attachment (W-PA)

Below 0: No Place Attachment

Raw data

Raw data obtained via the questionnaires and open-ended interviews are summarised and explained in Appendix G. Individual scores obtained via the Likert-scale questionnaire are listed as the dependent variable and labelled as 'PA-score'. The remaining nine variables are

the independent variables and are chosen for their ability to shed light on the sub-questions of the research question focused on location, rootedness, social and economic aspects. [Refer to Appendix G for the attributes of each of the variables.]

Statistical methods employed and presentation of data

The data obtained via the close-ended questionnaire was analysed first to determine the level of Place Attachment of each. These results were used in a linear regression approach between Place Attachment-score as dependent variable, and three other continuous variables namely age, length of stay and distance from the historical node, to model the relationship of each with the dependent variable. The categorical variables were interrogated in terms of relationships between the various categories within each variable, e.g. male vs. female, and so forth.

Only the results of the statistical tests are provided in this chapter; statistical details are provided in Appendix H. With the exception of the report on Place Attachment score vs. Distance from the historical node, each statistical report on a variable starts with the presentation of the raw data relevant to that particular variable in Appendix H. This is presented in the form of a bar chart for Place Attachment scores, and an additional pie chart for the categorical variables indicating the frequency distribution of each category within the research sample.

Statistical tools

Statistical results were obtained using a statistical calculator (Statpac Inc.) and a statistical analysis package (NCSS V9.0.8 released on January 24, 2014). Both are licensed to the author.

Statistical summaries

Level of Place Attachment

The mean value of 5.866667 on a scale of 0 to 7 indicates that the average respondent has a moderately strong attachment to his/her neighbourhood. 47% of respondents received the highest score of 7.

The minimum score of 2 is a potential outlier but it was decided to keep it and rather indicate it as such with each analysis. The population sample is small and a larger sample

might have contained more scores in the range 2 – 4 or lower.

Effect of Length of Stay on level of Place Attachment

Statistical results indicate there is a possibility that there is no linear relationship between Place Attachment scores and length of stay.

Effect of Age on level of Place Attachment

Statistical results indicate there is a strong possibility that there is no linear relationship between Age and level of Place Attachment.

Effect of distance from historical node on level of Place Attachment

Statistical results indicate there is a possibility that there is no linear relationship between distance from the historic node and level of Place Attachment

Effect of gender on level of Place Attachment

There is no statistically significant difference between the percent of success within male and female respondents.

Effect of population group on level of Place Attachment

There is a statistically significant difference in the level of Place Attachment between the White Population group and both the Black and Coloured groups.

Effect of language on level of Place Attachment

There is no statistically significant difference between the Place Attachment scores of the four language groups.

Effect of marital status on level of Place Attachment

There is no statistically significant difference between the Place Attachment scores of the married and widowed groups.

Effect of employment status on level of Place Attachment

There is no statistically significant difference between the Place Attachment scores of the various employment categories.

Relation between residential neighbourhood and level of Place Attachment

There is no statistically significant difference between the Place Attachment scores of

responses from within the three residential areas.

Conclusion

The average of the individual scores (mean), together with the standard deviation value, gives an indication of the consistency within a group. A low standard deviation score within a sub-group is an indication that all people in this particular sample group tend to have a close score on strength of Place Attachment. A large standard deviation score should be tested against the mode score (value that occurs most frequently in that set of data) as well as the median value (the middle value of a set of data) as a single low Place Attachment score can skew the results for that particular group. In the sub-categories White, Afrikaans, Male, Age 65+, Retired, Widowed, and Stay (length of residence) between 21 and 40 years all have a lower mean Place Attachment value. The most frequent individual Place Attachment value (mode) within each group, however, is seven for all but the White group. In this case it is a single individual (White, Afrikaans-speaking, retired widower who has lived in Jagersfontein between 21 and 40 years) with a low Place Attachment score that is responsible for potentially skewing the results on all of these categories.

The unemployed sub-category is more accurately reflected in its mode value which places it as the lowest Place Attachment value of the employment status category. Unemployment can have a negative influence on a person's level of Place Attachment as it has a direct influence on quality of life.

The English sub-category, however, stays consistently low with the most frequent value of five. All the individuals from the English-speaking category are from the White population group. All the individuals from the 0-20 years length of stay are from the White population as well as English-speaking categories.

The white population group has a consistently lower Place Attachment value than the other two population groups. Afrikaans speaking residents from the white population group have the lowest Place Attachment value of all the ethnic groups. A longer length of stay appears to have a positive influence on the level of Place Attachment. A comparison of the information on the seven individuals that obtained a perfect Place Attachment score of seven is more significant in sub-categories that are under-represented, or not represented, than those that are. None of them are from the English-speaking group. Only one person is

from the white population group.

The statistical scores obtained on all the various categories within each variable should not be viewed as contrary to the above as a statistical score is merely an indication of a probability of a null hypothesis. The average Place Attachment-score is high and, therefore, the scores are very close. Included with the statistical results is also a built-in failure factor (the alpha level) which in all of the above cases was set as .05 which means that five out of every hundred observations have a probability of being incorrect. The results are therefore measured against this threshold and not a direct interpretation of means, median and mode scores.

The high average of the Place Attachment scores confirms the results of the qualitative analysis in terms of the general strength of individual Sense of Place. The difference in degree of Sense of Place between the various cultural groups was not so clear in the qualitative analysis and the quantitative result is significant in this respect.

CHAPTER 7 : CONCLUSION

Introduction

This study has set out to explore the relationship between a Sense of Place and the historic built environment of Jagersfontein and has identified poor service delivery as a major threat to existing moderately strong to strong Sense of Place linked to the historic node. Despite an abundance of general as well as specific theoretical literature on this subject, this pilot study within the context of South Africa is inconclusive on account of the generalizability of its findings and will only be confirmed if comparable cases within the South African context arise. It does, however, provide useful insight into the potential applicability of the research model, which is based on European research, for the South African context.

Empirical Findings

The main empirical findings are chapter specific and are accordingly summarized within respectively Chapter 5, qualitative analysis of Sense of Place, and Chapter 6, quantitative analysis of Place Attachment. The aim with this section is not to repeat what was already discussed in these chapters but rather to synthesize the empirical findings and, where possible, to answer the following research questions of the study:

- a) **Distinctiveness:** Features that were identified as significant in the establishment of a Sense of Place includes the open-pit mine and the historic buildings of the town with particular reference to those situated in Town Square and the remainder of Meteor Street west of Town Square, i.e. the business node. To a large degree this can be summarized as the essence of the town's *Genius Loci*, although none of the interviewees made a direct reference to the town's character. The quantitative inquiry was not designed to assess this aspect and did, therefore, not shed any further light on this.
- b) **Location:** Distance from the historic node seems to play a larger role in promoting social cohesion than what it plays a role in people's attachment to the historic node. The finding in quantitative analyses corroborates the assumption reached in qualitative analysis that there is no discernable link between distance and level of affection for the historic node.
- c) **Identification:** Whereas the quantitative analysis determined the existence of a

moderate to strong level of Place Attachment with all but one interviewee, the qualitative analysis shed light on which particular aspects of the physical environment people strongly identify with. In addition to the distinctive aspects mentioned in a), each interviewee displayed a strong identification with his or her home.

- d) Continuity: This too, is a question that was mainly answered by the qualitative analysis and ties in with c) in that many interviewees reacted strongly at a personal level to threats to the historic environment which is clearly an indication that this area is viewed as an extension of the self.
- e) Dependency: The strong level of Place Attachment, which mainly focused on determining people's attachment to the areas where they live, indicates that their homes serve as the main place of serving in their needs. This is confirmed by the qualitative inquiry where most interviewees pointed out their homes as a place they like most and would not exchange for any other. In the absence of any places for social events, churches play a role in providing an opportunity for social interaction, but as pointed out this also results in a lack of social cohesion of the town in general as most activities are denomination specific. Religious affiliation was not part of the original questionnaire and was treated as an 'emergent' theme. As all the respondents made spontaneous reference this, no prompts were needed.
- f) Rootedness: Length of stay does not seem to have any impact on people's level of affinity for the town. Both qualitative and quantitative inquiry confirms this. This conclusion, however, might be misleading and requires qualification. Aspects such as living in the same house their grandparents did, or in the house/area/town where they grew up, were pointed out as reasons for interviewees' affinity with their environment and personal homes and are certainly an indication of rootedness. A more apt deduction would be that a long stay does not seem to be a requirement for a high level of Place Attachment, or conversely that a long stay does not necessarily equate to a high level of Place Attachment.
- g) Quality of the environment: Several interviewees have pointed out the peace and quiet of the town as an aspect of Jagersfontein that they enjoy. Quality, however, can also be interpreted as the physical condition of the town or the lack of a secure

environment. In the latter instance, there are aspects linked to poor service delivery that affects people's sense of the quality of their environment and as such has turned out to be one of the strongest influences on Sense of Place in Jagersfontein.

- h) Social aspects: Qualitative inquiry highlighted the lack of cross-cultural social ties between the different groups, but not the effect this might have on their Sense of Place in general. Quantitative inquiry shows that Sense of Place is in general higher among the Black and Coloured communities than what it is in the White population group although all three groups regarded the same issues as threats to their environment.
- i) Social capital: The qualitative inquiry indicates a connection between a healthy social capital and a sense of belonging. This is particularly noticeable in the case of interviewees who live in, or have ties with, Red Location.
- j) Political/economic influences: The political and economic influences on Sense of Place are in this research related to quality of the environment. Adverse influences at both political and economic level can have a negative manifestation in the environment that can severely impinge upon the quality of the environment. In this research it has proved to be the biggest threat to the environment which ironically aided in strengthening Sense of Place, rather than diminishing it.

The aforementioned questions, however, were aimed at answering the main research question, namely: Does the historic environment make a significant contribution to a Sense of Place for the current residents of Jagersfontein? The answer to this is that it does more than make a significant contribution; it is in fact key to their Sense of Place. However, as this was only a pilot study involving a small sample of the population, it does not automatically equate to being equally applicable to the larger population of the town and its associated townships and can at best serve as basis for further inquiry.

Theoretical and policy Implication

The theoretical implication of this research rests on the rationale behind this study as stated in Chapter 1 on page 3, namely the assumption that a strong relationship between a Sense of Place of people and the historic built environment of the town could translate to a strong social motivation for the preservation and conservation of these areas and consequently

also planning decisions for regeneration of the town.

Theoretical cases for service delivery and town planning in South Africa need to be revisited in order to include an understanding of which aspects of the physical environment residents personally identify with and which aspects in terms of service delivery and development of their town they view as threats to their existence. In this, both Sense of Place and the *Genius Loci* of a place have to be factored into the planning process.

The leading economic development authority Joseph Cortright as quoted by McMahon (2012), said *'the unique characteristics of place may be the only truly defensible source of competitive advantage for communities'*, which in the case of Jagersfontein is a vital point of importance to keep in mind with any future development.

Recommendation for future research

The current poor economy of the country in general and of Jagersfontein in particular, necessitates the urgent focus of development studies on this town. Jagersfontein's unique character combined with a potentially strong Sense of Place among its residents can form the basis of a development initiative to alleviate the economic stress it is experiencing on account of lack of job opportunities. In a report on an investigation of the role Place plays in sustainable community development, Dale *et al.* (2008: 278) argue that in places where there is a distinct character around which a Sense of Place is focused, there is an increased likelihood for sustainable community development to be rooted in connections between space and place, i.e. this strong Sense of Place can act as a catalyst for sustainable development initiatives.

Limitation of the study

This study has offered an evaluative perspective on the relationship, or lack thereof, between the historic built environment of Jagersfontein and its residents' Sense of Place. There are, however, a couple of limitations of this research that need to be considered in the evaluation of the results.

The first instance is to bear in mind that a Sense of Place is not static, and, as with self-identity, it is constantly re-adjusting to adapt to changes in the environment. What these results represent is a slice in time of a specific place under specific circumstances and might

not be equally applicable elsewhere. The methods employed, however, would be.

Second, a population sample of 15 is not large enough to be representative of the population of approximately 5 200. Generalisation of the research findings to a larger population was, however, not the aim, but instead to establish if there is a link between a Sense of Place and the historic environment. As such the aim with this study is to serve as a pilot study for further research that would allow a more in-depth analysis. The fact that there is on average a moderately high to high degree of a Sense of Place among the sample group justifies further investigation on a larger scale.

In conclusion

This pilot study was successful in establishing that the historic built environment does play a role in the establishment of a Sense of Place within the South African context. At the same time, however, it has also determined that the subject area contains unique characteristics that might not make the results equally applicable to other areas within South Africa. For regeneration of the town itself, however, these results can serve as a valuable platform for further research and practical application.

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APPENDIX A: INFORMATION ON RESEARCH POPULATION SAMPLE

The Population profile of Jagersfontein

Statistical data for the current population of the subject area was obtained from the results of the 2011 census records via the official South African Government website for statistical records¹. The 2011 population count for Jagersfontein (which includes Mosenthalville) and Itumeleng is 5200 comprising 1774 households.

Population Group	Jagersfontein + Mosenthalville	Itumeleng	Number of people	% of population of JGF & Itumeleng
Black	600	3561	4161	80.0
Coloured	387	305	692	13.30
Indian/Asian	12	15	27	0.52
White	271	19	290	5.58
Other	21	10	31	0.60
Total	1290	3910	5200	100

Table A-1: Population group distribution

Compared to the 2001 census data the population profile has change as follows in a period of ten years:

Population Group	2001	2011	% increase/decrease
Black	4038	4161	2.96% increase
Coloured	665	692	3.9 % increase
Indian/Asian	0	27	100% increase
White	424	290	31.6 % decrease
Other	0	31	100% increase
TOTAL	5127	5200	1.4 % increase

Table A-2: Population profile of Jagersfontein/Itumeleng 2001 and 2011

¹ <http://interactive.statssa.gov.za>

The Free State showed a general negative net migration growth for the period between 2001 and 2011 (Statistics, 2012, p. 29) which is not reflected in the population of Jagersfontein and Itumeleng.

First Language	Itumeleng	Jagersfontein/ Mosenthalville	Total	% population
Sesotho	2319	334	2653	51.02
Afrikaans	663	703	1366	26.28
isiXhosa	486	68	554	10.65
Setswana	272	41	313	6.02
English	65	72	137	2.63
Sign Language	35	1	36	0.69
Other	31	17	48	0.92
isiZulu	13	1	14	0.27
Sepedi	10	1	11	0.21
isiNdebele	9	4	13	0.25
Tshivenda	6	0	6	0.12
Xitsonga	1	0	1	0.02
Not applicable	0	48	48	0.92
Total	3910	1290	5200	100

Table A-3: Language distribution over population

Economic profile

Only 55.93% of the population of Jagersfontein falls within an employable age [18-65]. The remainder 44% could potentially qualify for child grants or government old age pensions depending on whether they meet the requirements for that. With only 18% of the population of Jagersfontein currently employed it means that the majority of the population has little to no income. The maximum government grant is R1270 which is for old age

pension (only 7% of the population is 65 and older) or disability, and it is assumed that even less of the population would be eligible for the latter. Child support grant is R300 per child and foster child grant R800 (Government, 2013). This is clearly reflected in the visual picture of the built environment of Jagersfontein where the business area contains the well-maintained buildings and many of the buildings in the residential areas are in need of some maintenance.

Respondent Profile

Respondents were assured anonymity due to the potential incriminating nature of some of the questions and are therefore referred to as merely A, B, C and so forth.

Resp.	Population Group	Age Group	Gender	Language	Marital Status	Employment Status	Home area	Length of stay
A	White	51-65	F	English	Married	Employed	Jagersfontein	35
B	White	51-65	F	Afrikaans	Married	Employed	Jagersfontein	26
C	Black	51-65	F	Twana	Widow	Employed	Itumeleng	62
D	Black	65 +	F	Sesotho	Widow	Retired	Jagersfontein	75
E	Black	45-50	F	Twana	Married	Employed	Itumeleng	49
F	Black	65 +	F	Twana	Widow	Retired	Itumeleng	82
G	Coloured	65 +	F	Afrikaans	Widow	Retired	Mosenthalville	60
H	Coloured	51-65	F	Afrikaans	Widow	Unemployed	Mosenthalville	58
I	Black	36-50	F	Sesotho	Married	Unemployed	Jagersfontein	25
J	White	26-35	F	English	Married	Employed	Jagersfontein	2
K	White	36-50	F	English	Divorced	Employed	Jagersfontein	10

L	White	65 +	M	English	Married	Retired	Jagersfontein	13
M	White	65 +	M	Afrikaans	Widower	Retired	Jagersfontein	27
N	White	65 +	M	Afrikaans	Married	Retired	Jagersfontein	31
O	Coloured	51-65	M	Afrikaans	Married	Employed	Mosenthalville	60

Table A- 4: Respondent profile

Language used for interview

All interviewees indicated either Afrikaans or English as their preferred language for the interview and did not make use of the offer of an interpreter. The Sotho and Twana-speaking interviewees indicated Afrikaans as the preferred medium for the interview. The in-depth nature of the answers and explanations provided by these interviewees indicates that the questions were understood within its context.

APPENDIX B: QUESTIONNAIRES FOR INTERVIEWS

Questionnaire used for open-ended interviews:

1. Gender: [male][female]
2. Age: Do you mind telling us how old you are or alternatively tell us in which of the following age groups you fall? [18-25]; [26-35]; [36-50]; [51-65]; [66 plus]
3. What is the area where you live called?
4. Where were you born?
5. How long have you lived in your current area?
6. Where did you live before that?
7. Where did you live as a child living with your parents/guardians?
8. Do you have any children living with you?
9. Do you like living in this area or would you rather live elsewhere? (Ask for reasons)
10. Are there any areas in your neighbourhood that you feel is not safe, especially for children or older people? (Ask to elaborate)
11. Do you have any *spaza* shops in your area?
12. If yes, how many?
13. How often do you shop there? Every day/once a week/once a month/occasionally
14. What kind of leisure activities do you partake in and where? (Ask to elaborate)
15. How many family members live in the same area as you do? [Prompt to ascertain approximate distance from interviewee's home]
16. How many close friends that are not also family members live in the same area as you do? [Prompt to ascertain approximate distance from interviewee's home]
17. Do you ever visit any of the other areas (name areas other than the one the interviewee lives in)
18. For which purposes do you visit those areas?
19. Which mode of transport do you use to go to these areas? (e.g. walk, taxi, own car, bicycle, family/friends with car, other)
20. Which area/building/place in your area do you like best (and why)?
21. Which area/building/place in your area do you like least (and why)?
22. Do you often go out at night? (e.g. visiting friends /family or for leisure)[If not, is there a

reason?]

23. What language do you speak at home?
24. How often do you visit the centre of town?
25. For which purposes do you visit the centre of town?
26. Are there any buildings/area in the centre of town that you particularly like? (If yes, prompt for more detail.)
27. Are there any buildings/area there that you really do not like? (If yes, prompt for more detail.)
28. (If person grew up in Jagersfontein) Can you remember what the centre of town (business area) looked like when you were a child?
29. Do you think it is safe for children or older people to go to the centre of town on their own?
30. How old do you think those buildings are?
31. Which building do you think is the oldest? (Prompt for reason)
32. How do these old buildings make you feel?
33. Can you remember any building in that area that was built in your lifetime?
34. If yes, was there a building in its place before that?
35. If yes, what happened to the old building?
36. I notice there is an open space in the centre of town, do you think they should build more shops there? (Ask to motivate answer.)
37. Do you think Jagersfontein is a better place now than when you were a child? (Ask to motivate answer)
38. Which of the following applies to you: [single]; [married or with a partner]; [divorced/separated/widowed]
39. What do you think is the most distinctive feature of Jagersfontein?
40. What do you think visitors like best about Jagersfontein?
41. Do you think the old buildings in Jagersfontein should be replaced with new buildings? (Ask to motivate answer.)
42. Do you have any childhood or memory of the town centre? Would you care to share it with us?
43. In which of the following ethnic groups would you place yourself? white; black;

coloured; Asian; other

44. (Showing interviewee photographs of different areas): Can you identify any of these areas?
45. If you had to attach an emotion to each of these areas, what would it be?
46. If you could choose six buildings/areas/structures in the entire Jagersfontein (other than your home) that you view as very special and would never want to see changed, which six would that be?
47. What are your reasons for choosing these particular six?
48. Do you know how Jagersfontein got its name?
49. What can you tell me about the history of Jagersfontein?

The majority of the above questions are used to steer the interview and interviewees are prompted to elaborate on their answers.

Questions relating to personal information such as age, marital status, home language, and so forth are spaced throughout the interview to create breaks between different pre-defined themes designed to inform the research question.

In addition to the above interviewees are asked to describe different routes on foot, e.g. from their homes to certain points like the centre of town, to a neighbouring township, to places they like to visit. [The aim is to see which landmarks they use to navigate their way around town.]

Close-ended questions to be used for quantitative analysis:

50. Do you agree or disagree with the following statements relating to your area:

Please tick one box in each row:

	I agree	I disagree	I am not sure
a) The area where I live means a lot to me			
b) I could be equally happy living somewhere else			
c) I really feel I belong to my area			
d) I would rather live somewhere else			
e) I am proud of where I live			
f) I am interested in the history of my area			
g) I care about what my area looks like			

Approximate time per interview: 2 hours

Appendix C : Jagersfontein Coat of Arms



Source: (Barnard, Du Plessis, Van der Mescht, & Visser, 1982) Front Page

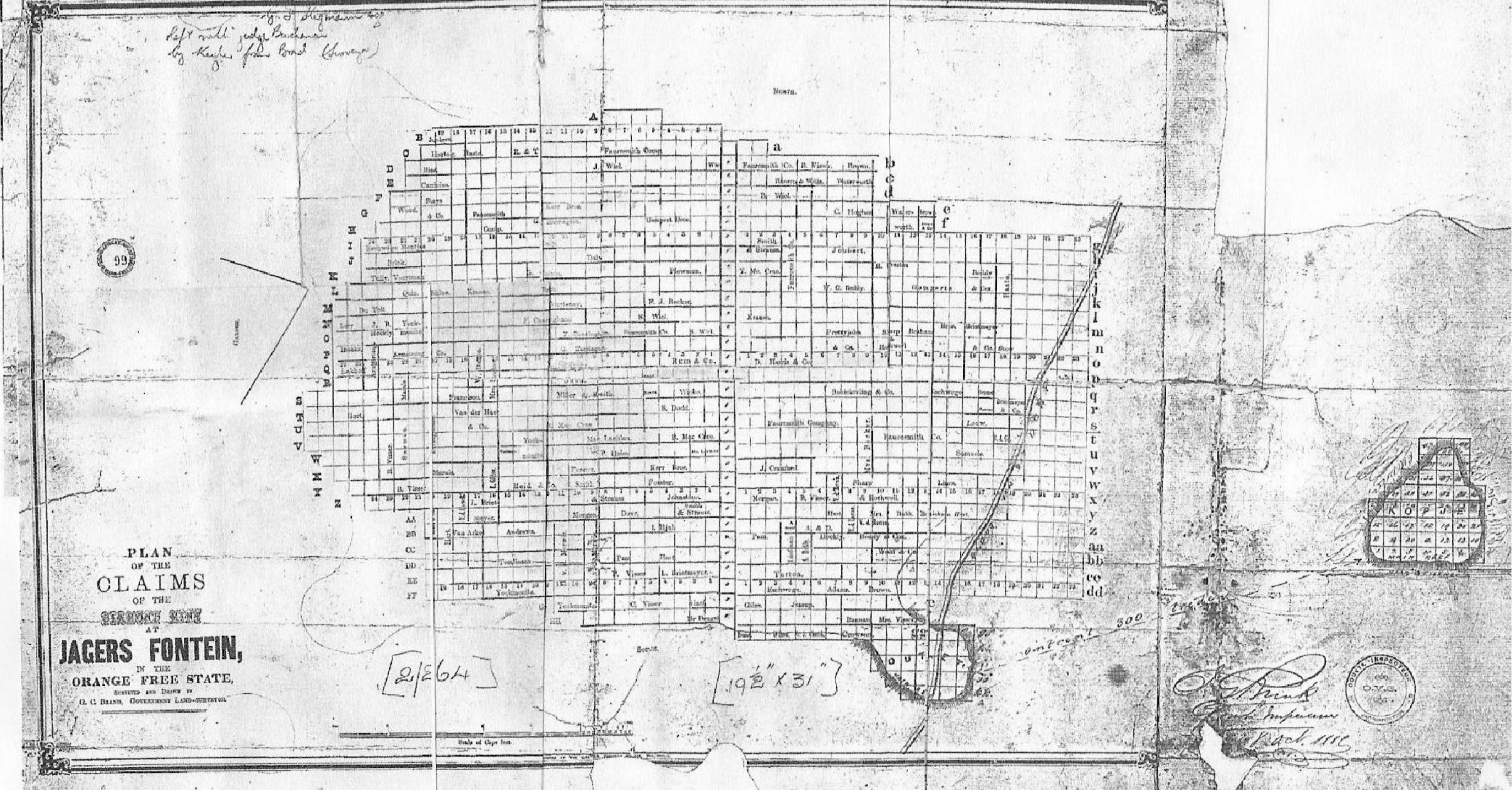


Figure D-1: 1878 survey map of claims (open-pit mine)[Source: De Beers Archives]

APPENDIX E: THE DIAMOND FIELDS ISSUE

In the period 1846 to 1854 the Free State was under British control and known as the Orange River Sovereignty. The British, however, found it increasingly difficult to keep the peace between the marauding Griqua and other indigenous groups as well as the White farmers who settled in this region and decided to withdraw their forces back to the Cape Colony.

After the withdrawal of the British from the Orange River Sovereignty, the Republic of the Orange Free State was established by the signing of the Bloemfontein Convention on 23 February 1854. Sir George Clerk represented Britain, and twenty five representatives of the people of the new country was present. The convention guaranteed the independence of the territory between the Orange River in the south, the Vaal River in the west and north, and the Drakensberg in the east (VAB-OSS, Vol 18). With the discovery of diamonds in the Free State, the British controlled Cape Colony suddenly realised that these treasures lay outside their reach.

While the British was contemplating ways to annex the diamond fields for the Cape Colony, two other parties decided to lay claim to the area; the Griqua under the leadership of Nikolaas Waterboer, and the Transvaal Boer Republic (Zuid-Afrikaanse Republiek) - the latter on the diggings at the Harts River. Waterboer based his claim on a treaty his father, Andries Waterboer, signed with the British on 11 December 1834 (Cory, 1926: 277).

The Transvaal claim was quickly dismissed as an opportunistic move, but the government of the Orange Free State was willing to meet with Waterboer to provide him an opportunity to prove his case. This led to a meeting in August 1870 at Nooitgedact between Waterboer assisted by his lawyer, Arnot, and a delegation of the Orange Free State (VAB-AmptPubs, Vol OR87(B)).

Not satisfied with the proof provided, President Brand of the OFS proceeded to proclaim the Campbell grounds [Refer to Figure E-1] as Free State territory (Spies, 1941: 327). Waterboer, however, turned to the British for help and asked to have his land placed under British protection. Brand was aware of this and also went to see the governor of the Cape in Cape Town at the end of 1870 (Collins, 1907: 342).

In spite of this the Cape Colony annexed the diamond fields area known as Griqualand West as crown land on 27 October 1871 (Hohne, 19 December 1871) [Refer to Figure E-2]. What followed was a five year argument between the OFS and the Cape Colony regarding the diamond fields which ended in an official agreement concluded on 13 July 1876 whereby the OFS received £90 000 in compensation for the loss of the diamond fields (Spies, 1941: 344).



Figure E-1: Map of the Diamond Fields (Campbell grounds north of the Vaal River and South Adamantia south of the Vaal) (Lindley, 1873: loc. 454).



Figure E-2: Map showing the boundaries of Griqualand West which incorporated the area known as Waterboer's Territory, the OFS-owned Campbell's Land north of the Vaal River and a section of the OFS south of the Vaal River which included the rich deposits of the Bultfontein and Kimberley mines. [Section of a 'Sketch map of South Africa showing British possessions – July 1885' retrieved from <http://www.britishempire.co.uk/images3/southafrica1885map.jpg>]



APPENDIX G: RAW STATISTICAL DATA & VARIABLE ATTRIBUTES

Data obtained from close-ended questionnaire (Respondents indicated by A-O)

Question	Agree	Disagree	Not sure
a) The area where I live means a lot to me	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O		
b) I could be equally happy living somewhere else	K, M	C, D, E, F, G, H, I, L, N, O	A, B, J
c) I really feel I belong to my area	A, B, C, D, E, F, G, I, J, K, L, N, O	M	H
d) I would rather live elsewhere		C, D, E, F, G, H, I, J, K, L, N, O	A, B, M
e) I am proud where I live	A, C, D, E, F, G, H, I, J, K, L, M, N, O		B
f) I am interested in the history of my area	A, B, C, D, E, G, H, I, J, K, M, N, O	F	L
g) I care about what my area looks like	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O		

Table G-1: Interviewee responses to close-ended questionnaire

Data collected from the open-ended interviews

Resp.	Pop. Grp	Age Grp	Gender	Language	Marital Status	Employment Status	Home area	Length of stay
							Distance from business node	
A	White	51-65 (62)	F	English	Married	Employed	Jagersfontein (north)	35
							0.71	
B	White	51-65 (51)	F	Afrikaans	Married	Employed	Jagersfontein (west)	26
							0.38	
C	Black	51-65 (62)	F	Setswana	Widow	Employed	Itumeleng (Red Loc.)	62
							0.97	
D	Black	65 + (75)	F	Sesotho	Widow	Retired	Jagersfontein (Mine Square)	75
							0.34	
E	Black	36-50 (49)	F	Setswana	Married	Employed	Itumeleng (east)	49
							2.99	
F	Black	65 + (82)	F	Setswana	Widow	Retired	Itumeleng (Red Loc.)	82
							0.97	
G	Coloured	65 + (70)	F	Afrikaans	Widow	Retired	Mosenthalville	60
							0.66	
H	Coloured	51-65 (58)	F	Afrikaans	Widow	Unemployed	Mosenthalville	58

							0.61	
I	Black	36-50 (44)	F	Sesotho/ Afrikaans	Married	Unempl oyed	Jagersfontein (east - old Road workers camp)	25
							0.85	
J	White	26-35 (26)	F	English	Married	Employe d	Jagersfontein (north)	2
							0.39	
K	White	36-50 (49)	F	English	Divorce d	Employe d	Jagersfontein (Mine Square)	10
							0.28	
L	White	65 + (76)	M	English	Married	Retired	Jagersfontein (east)	13
							0.16	
M	White	65 + (68)	M	Afrikaans	Widow er	Retired	Jagersfontein (central)	27
							0.18	
N	White	65 + (70)	M	Afrikaans	Married	Retired	Jagersfontein (central)	31
							0.31	
O	Colou red	51-65 (60)	M	Afrikaans	Married	Employe d	Mosenthal- ville	60
							0.63	

Table G-2: Interview information obtained from interviews

Variables and their attributes:

Nature	Variable	Attributes	Exhausted all options Y/N
Dependent	PA-score	-7 to +7 (Mutually exclusive) Continuous	Exhaustive – includes full range from minimum to maximum score that can be obtained via test calculated as per table 2 on Page 100
Independent	Population Group	White Black Coloured (Mutually exclusive) Categorical/Nominal	Not exhaustive - Indian/Asians not included as they are relative newcomers to the area
Independent	Language Group	Afrikaans English Sesotho Setwana (Not mutually exclusive – used main language spoken at home) Categorical/Nominal	Not exhaustive - These are the four main languages of this area – adding all eleven official languages will contribute to too much noise
Independent	Gender	Male Female (Mutually exclusive) Dichotomous	Not Exhaustive

Independent	Age Group	26-35; 36-50; 51-65; 65+ (Mutually exclusive) Continuous/ratio	Not Exhaustive - Children under the age of 18 were purposefully excluded. Was not able to find any interviewees in the age range 19-25.
Independent	Marital Status	Single/Divorced Married Widowed (Mutually exclusive) Categorical/nominal	Exhaustive
Independent	Employment	Unemployed Employed Retired (Mutually exclusive - in this research) Categorical/nominal	Exhaustive
Independent	Neighbourhood area	Jagersfontein Itumeleng Mosenthalville (Mutually exclusive) Categorical/nominal	Not exhaustive – Charlesville was not included to fall within the limited scope of available time for the research as well as its relative small numbers

Independent	Length of stay	0-20; 21-40; 41-60; 61-80+ (Mutually exclusive) Continuous/ratio	Exhaustive
Independent	Distance from historical node	0 to 3 km (Mutually exclusive) Continuous	Exhaustive (2.9 km is the furthest point away from the historical node)

Table G-3: Table of variables and their attributes

APPENDIX H: STATISTICAL DESCRIPTIONS

Level of Place Attachment

Individual scores were translated as follows:

Level of Attachment	Score	Results (Interviewees)	% of sample
S-PA	6-7	C; D; E; G; H; I; J; L; N; O	67%
MS-PA	4-5	A; B; F; K	27%
MW-PA	2-3	M	6%
W-PA	0-1		0%

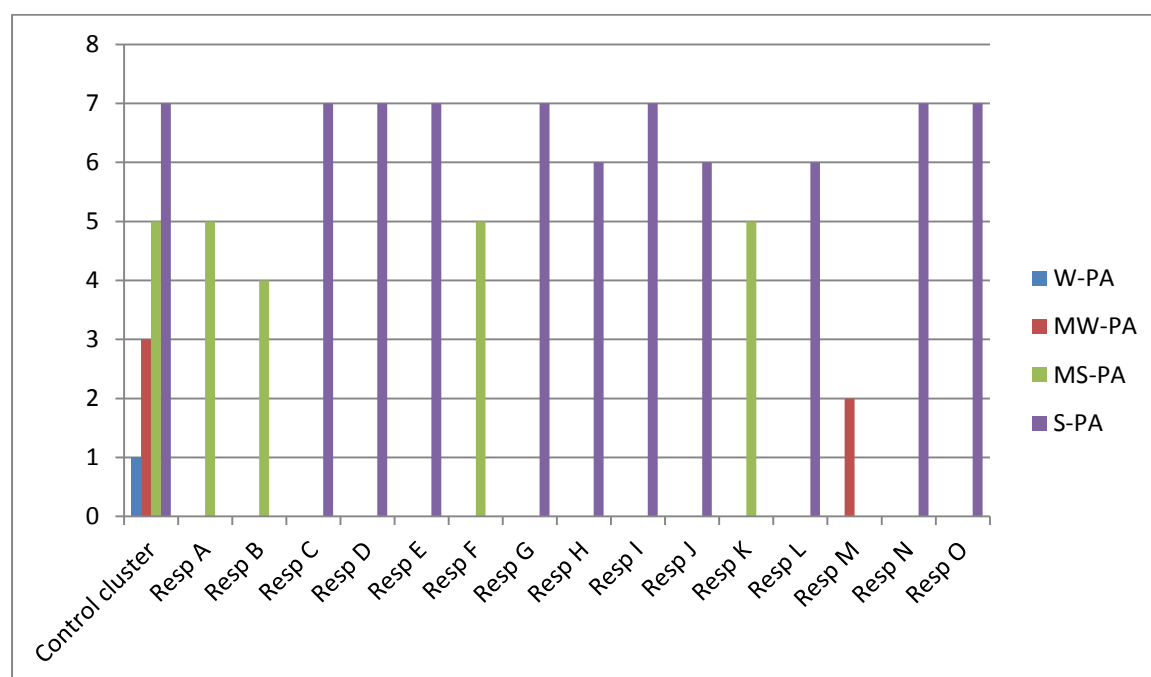


Chart H-1: Individual scores in research sample of level of Place Attachment

Statistical Summary Report for variable 'PA-score' [Refer to Attachment I]

<u>Variable</u>	Count	Missing Count	Mean	Median	Standard Deviation
PA_Score	15	0	5.866667	6	1.45733
<u>Variable</u>	Standard Error	Sum	Coef of Variation	Coef of Dispersion	Minimum
PA_Score	0.3762809	88	0.24841	17.778	2
<u>Variable</u>	Maximum	Range	Interquartile Range	10th Percentile	25th Percentile
PA_Score	7	5	2	3.2	5

<u>Variable</u>	75th Percentile	90th Percentile
PA_Score	7	7

PA-Score according to Length of Stay

Length of stay	% MW-PA	% MS-PA	% S-PA	Frequency of length of stay within sample group
0-20	0 %	33 %	66 %	100 %
21-40	20 %	40 %	40 %	100 %
41-60	0 %	0 %	100 %	100 %
61-80+	0 %	33 %	66 %	100 %

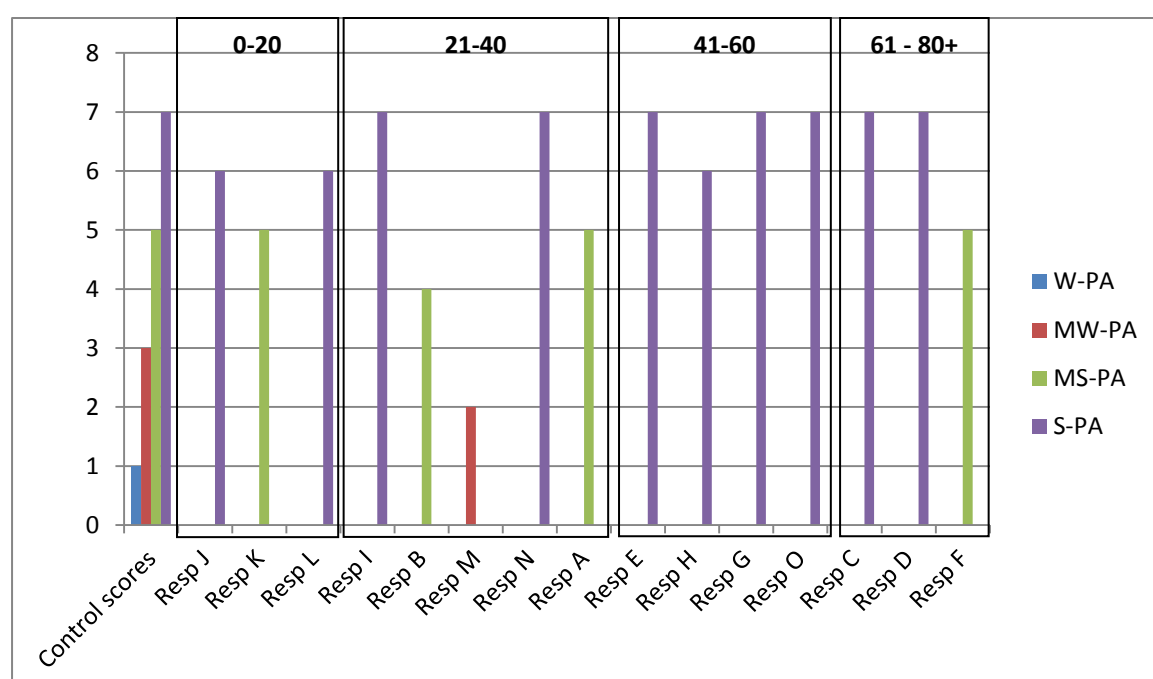
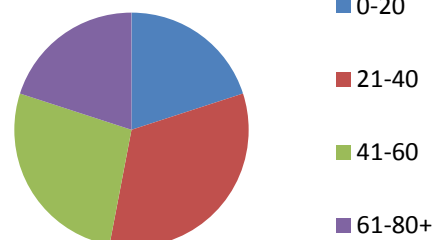


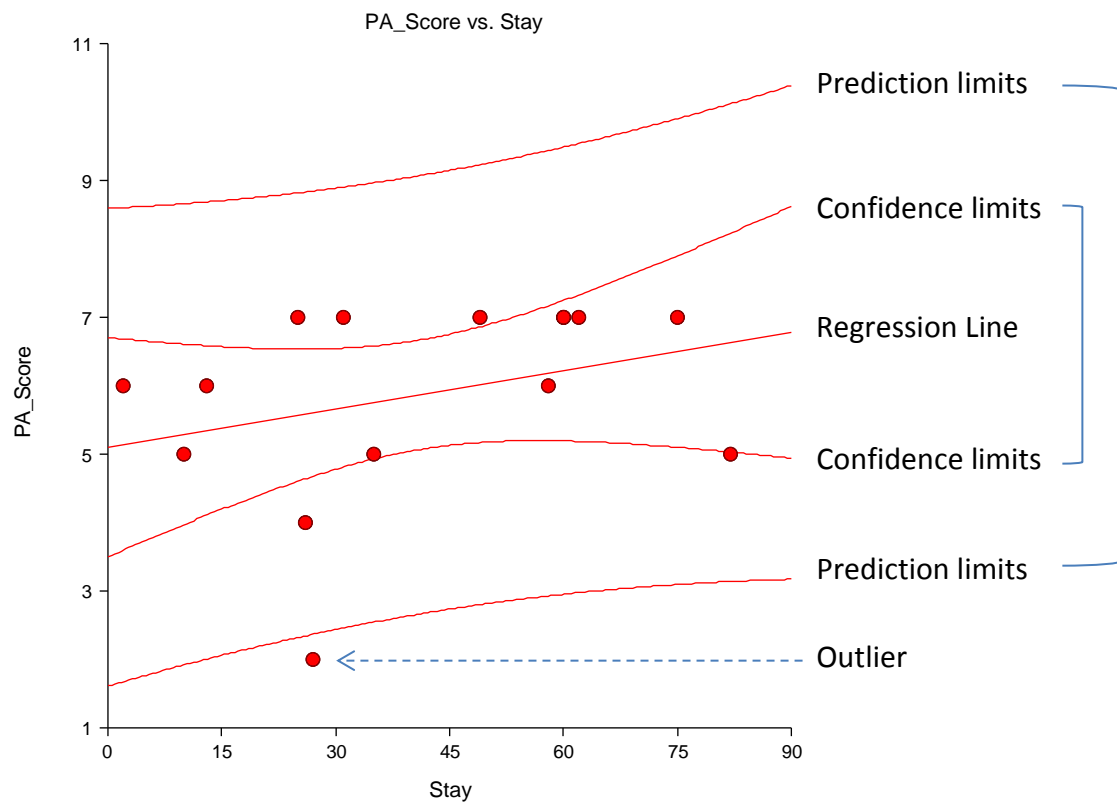
Chart H-2: Level of Place Attachment according to length of stay

Statistical Summary Report for variable 'stay' (individual periods used as values)

<u>Variables</u>	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
Stay	15	0	41	35	24.54151	6.336591
<u>Variables</u>	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
Stay	615	0.59857	59.429	2	82	80
<u>Variables</u>	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile	
Stay	35	6.8	25	60	77.8	

Linear Regression Report

Y = PA_Score X = Stay

Linear Regression Plot Section**Summary Statement**

The equation of the straight line relating PA_Score and Stay is estimated as: $PA_Score = (5.1033) + (0.0186) Stay$ using the 15 observations in this dataset. The y-intercept, the estimated value of PA_Score when Stay is zero, is 5.1033 with a standard error of 0.7407. The slope, the estimated change in PA_Score per unit change in Stay, is 0.0186 with a standard error of 0.0156. The value of R-Squared, the proportion of the variation in PA_Score that can be accounted for by variation in Stay, is 0.0983. The correlation between PA_Score and Stay is 0.3136 which is interpreted as a weak uphill (positive) linear relationship between PA-scores and Length of Stay.

A significance test that the slope is zero resulted in a t-value of 1.1906. The significance level of this t-test is 0.2551. Since $0.2551 > 0.0500$, the hypothesis that the slope is zero is not rejected, i.e. there is a possibility that there is no linear relationship between PA-scores and Length of Stay.

The estimated slope is 0.0186. The lower limit of the 95% confidence interval for the slope is -0.0152 and the upper limit is 0.0524. The estimated intercept is 5.1033. The lower limit of the 95% confidence interval for the intercept is 3.5031 and the upper limit is 6.7034.

PA-scores according to Age

Age	% MW-PA	% MS-PA	% S-PA	
26-35	0 %	0 %	100 %	100 %
36-50	0 %	33 %	67 %	100 %
51-65	0 %	40 %	60 %	100 %
65+	17 %	17 %	66 %	100 %

Age group representation within sample group

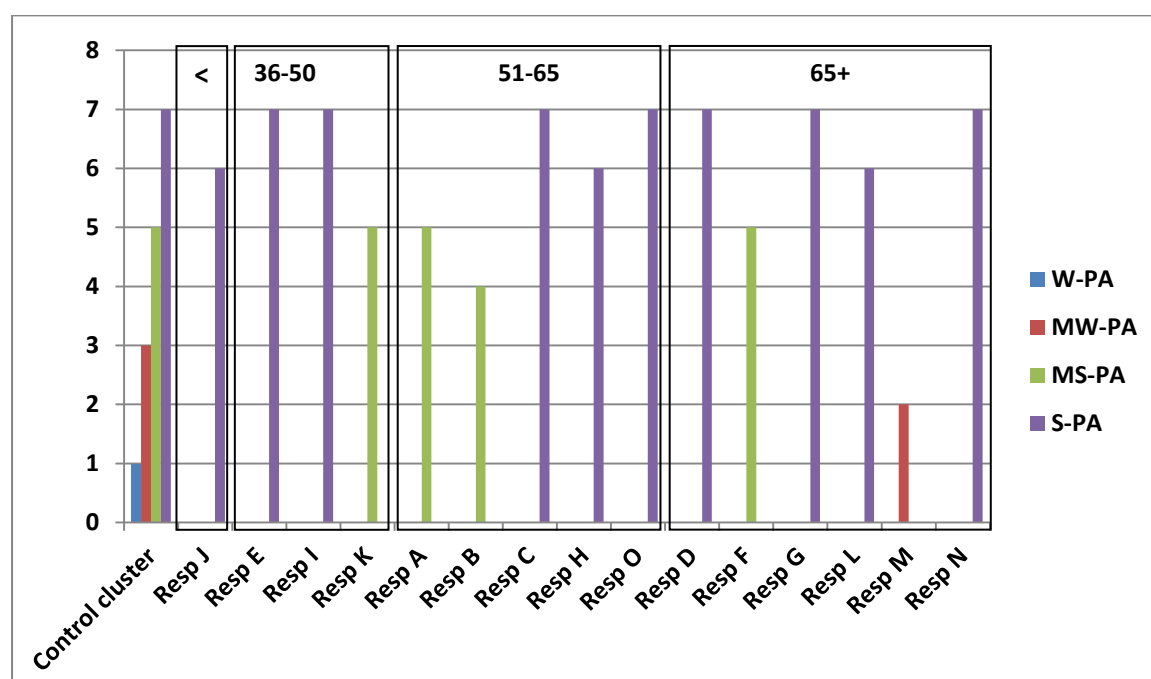
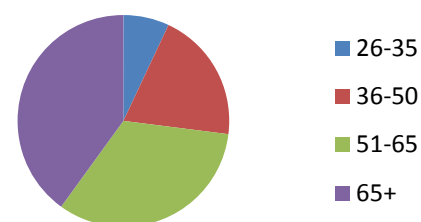


Chart H-3: Level of PA-score within age groups

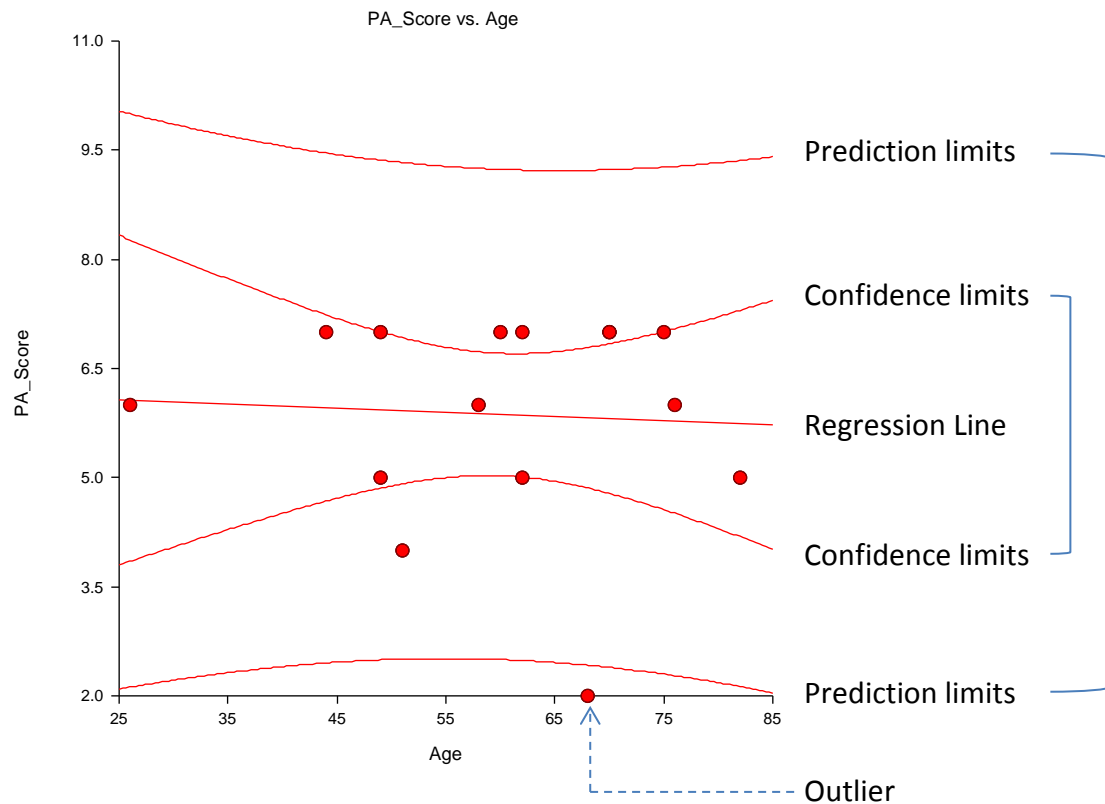
Statistical Summary Report for variable 'age' (Individual ages used as values)

<u>Variables</u>	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
Age	15	0	60.13334	62	14.57918	3.764327
<u>Variables</u>	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
Age	902	0.24245	17.849	26	82	56
<u>Variables</u>	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile	
Age	21	36.8	49	70	78.4	

Linear Regression Report

Y = PA_Score X = Age

Linear Regression Plot Section



Summary Statement

The equation of the straight line relating PA_Score and Age is estimated as: $PA_Score = (6.2048) + (-0.0056) Age$ using the 15 observations in this dataset. The y-intercept, the estimated value of PA_Score when Age is zero, is 6.2048 with a standard error of 1.7095. the slope, the estimated change in PA_Score per unit change in Age, is -0.0056 with a standard error of 0.0277. The value of R-Squared, the proportion of the variation in PA_Score that can be accounted for by variation in Age, is 0.0032. The correlation between PA_Score and Age is -0.0563. Since the value is closer to zero than it is to -0.30 (a weak negative linear relationship), there is a strong possibility that there is no linear relationship between Age and level of PA-score.

A significance test that the slope is zero resulted in a t-value of -0.2032. The significance level of this t-test is 0.8422. Since $0.8422 > 0.0500$, the hypothesis that the slope is zero is not rejected, i.e. it confirms the possibility that there is no linear relationship between PA-

scores and age.

The estimated slope is -0.0056. The lower limit of the 95% confidence interval for the slope is -0.0654 and the upper limit is 0.0542. The estimated intercept is 6.2048. The lower limit of the 95% confidence interval for the intercept is 2.5116 and the upper limit is 9.8980.

Level of Place Attachment according to Distance from historical node

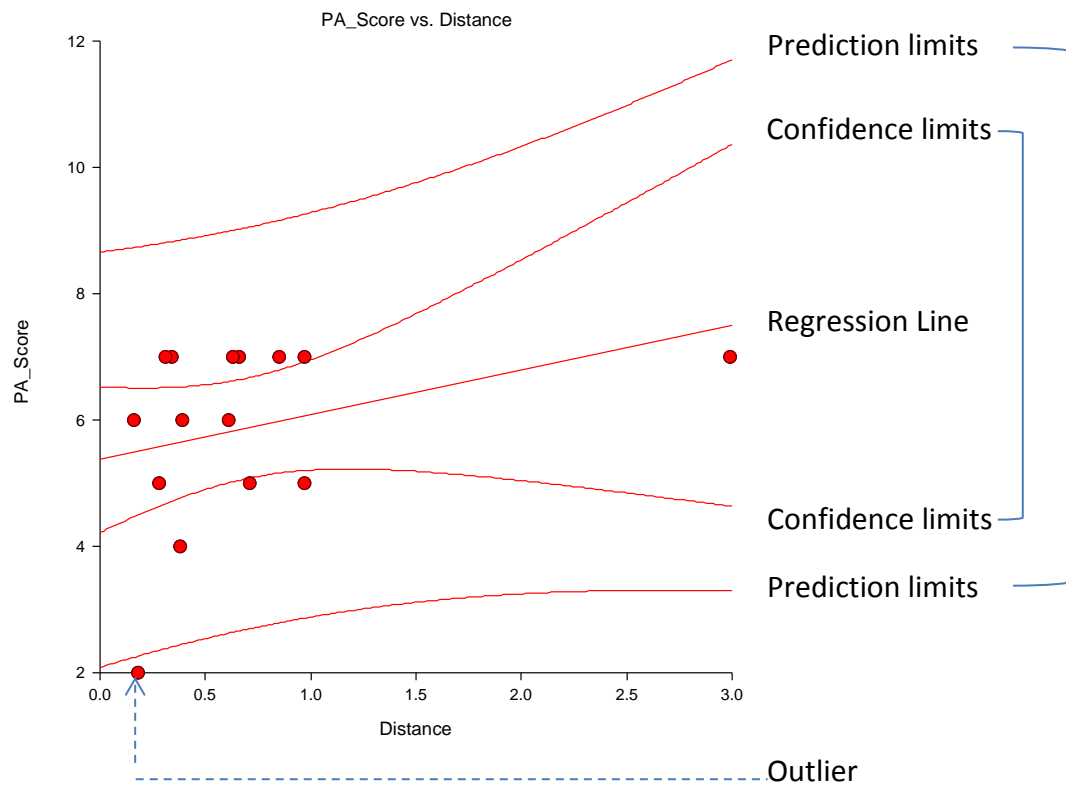
Statistical Summary Report for variable Distance

<u>Variable</u>	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
Distance	15	0	0.6953334	0.61	0.6889626	0.1778894
<u>Variable</u>	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
Distance	10.43	0.99084	62.732	0.16	2.99	2.83
<u>Variable</u>	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile	
Distance	0.54	0.172	0.31	0.85	1.778	

Linear Regression Report

Y = PA_Score X = Distance

Linear Regression Plot Section



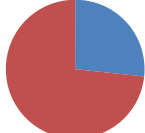
Summary Statement

The equation of the straight line relating PA_Score and Distance is estimated as: $PA_Score = (5.3748) + (0.7074) \text{ Distance}$ using the 15 observations in this dataset. The y-intercept, the estimated value of PA_Score when Distance is zero, is 5.3748 with a standard error of 0.5322. The slope, the estimated change in PA_Score per unit change in Distance, is 0.7074 with a standard error of 0.5529. The value of R-Squared, the proportion of the variation in PA_Score that can be accounted for by variation in Distance, is 0.1118. The correlation between PA_Score and Distance is 0.3344 which indicates a weak uphill (positive) linear relationship between PA-Score and distance from the historic node.

A significance test that the slope is zero resulted in a t-value of 1.2794. The significance level of this t-test is 0.2231. Since $0.2231 > 0.0500$, the hypothesis that the slope is zero is not rejected, i.e. there is a possibility that there is no linear relationship between PA-score and distance from the historic node.

The estimated slope is 0.7074. The lower limit of the 95% confidence interval for the slope is -0.4871 and the upper limit is 1.9018. The estimated intercept is 5.3748. The lower limit of the 95% confidence interval for the intercept is 4.2251 and the upper limit is 6.5245.

Level of Place Attachment according to gender

Gender	% MW-	% MS-	% S-PA		Gender representation within sample group
Group	PA	PA			
Female	0 %	36 %	64 %	100 %	
Male	25 %	0 %	75 %	100 %	

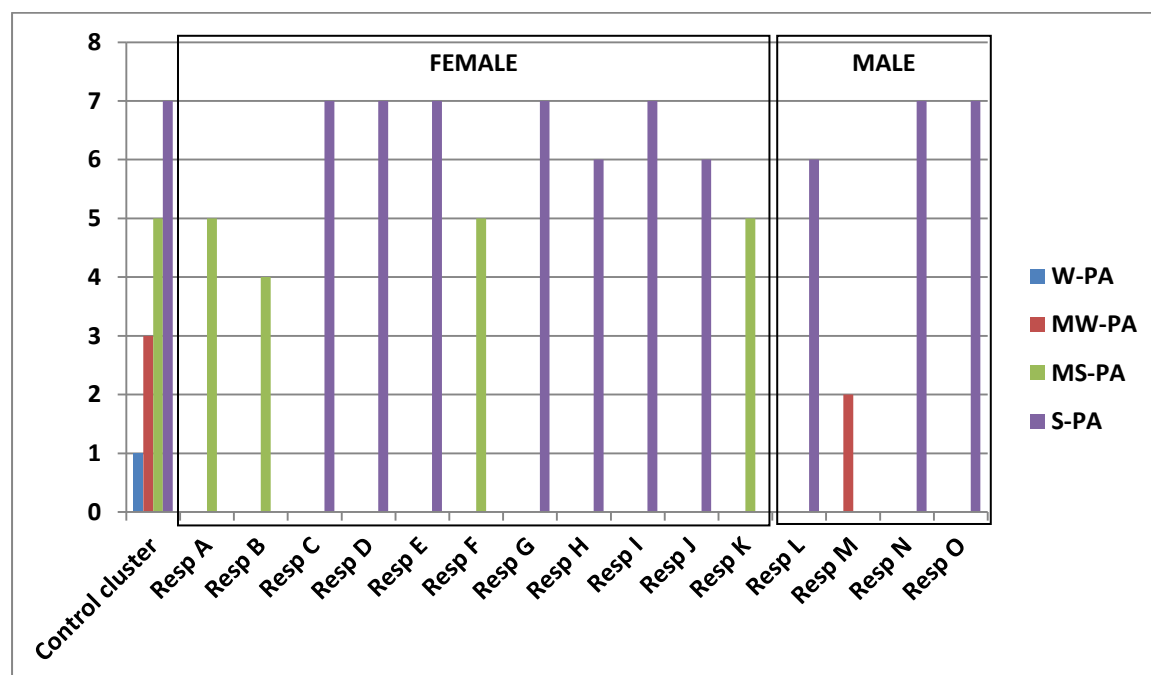


Chart H-4: Level of Place Attachment according to gender

Statistical Summary Report for categories of variable 'gender'

Variables	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
Female	11	4	6	6	1.095445	0.3302891
Male	4	11	5.5	6.5	2.380476	1.190238

Variables	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
Female	66	0.18257	15.152	4	7	3
Male	22	0.43281	23.077	2	7	5

Variables	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile
Female	2	4.2	5	7	7
Male	4	2	3	7	7

Proportions test between male and female [Refer to Attachment J]

A proportions test (two independent proportions and 2 by 2 tables) was conducted on the proportions of successes between male and female respondents where 'success' is measured as a PA-score between 6 and 7 (i.e. indicative of a Strong level of Place Attachment).

A two-sided z test of the proportions of Female ($p1 = 0.6364$) and Male ($p2 = 0.7500$) renders a z statistic of -0.413 with a probability level of 0.6797. In terms of this test H_0 ($P1 = P2$) cannot be rejected at $\alpha = 0.05$. Similar results are obtained for a Chi-Square two-sided test.

As the sample is less than 30 an additional two-sample t test between proportions was performed to determine whether there is a significant difference between male and female respondents with respect to the percent of success within each group.

The t statistic was not significant at the .05 alpha level, $t(13)=0.413$, $p=.6864$ which confirms the results of the previous two tests in that there is no statistically significant difference between the percent of success within male and female respondents. Gender, therefore, does not seem to play a determining role in level of Place Attachment.

Level of Place Attachment according to Population group

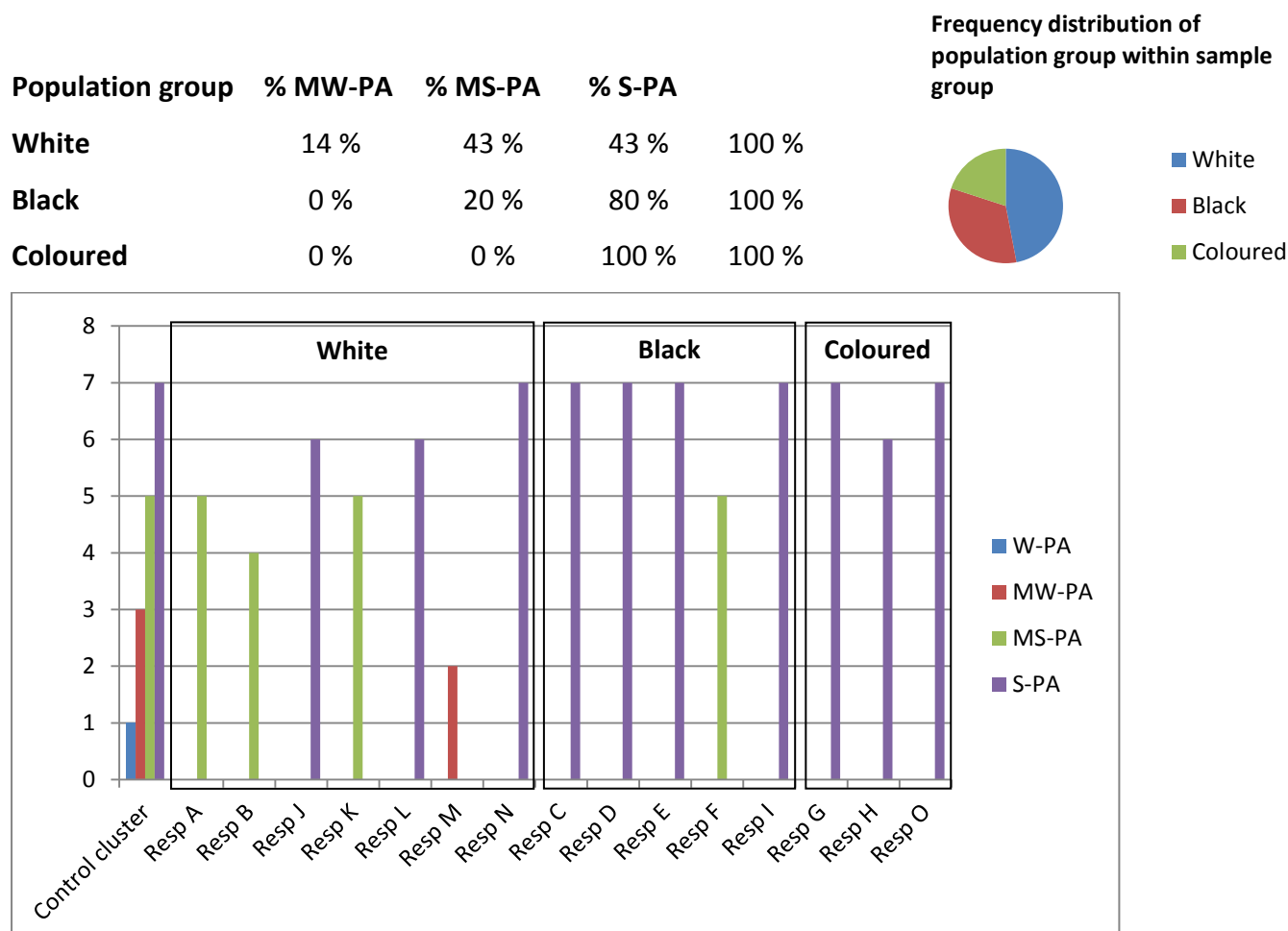


Chart H-5: PA-score according to population group

Statistical Summary Report for categories of variable 'Population Group'

Variables	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
White	7	8	5	5	1.632993	0.6172134
Black	5	10	6.6	7	0.8944272	0.4
Coloured	3	12	6.666667	7	0.5773503	0.3333333

Variables	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
White	35	0.32660	22.857	2	7	5
Black	33	0.13552	5.714	5	7	2
Coloured	20	0.08660	4.762	6	7	1

Variables	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile
White	2	2	4	6	7
Black	1	5	6	7	7
Coloured	1	6	6	7	7

ANOVA test

Source of Variation	DF	Sum of Squares	Mean Squares	F-Ratio	Prob.
Between	2	9.9	4.9	2.979	.0890
Within	12	19.9	1.7		
Total	14	29.7			

Post-hoc *t* tests

Group	Group	<i>t</i> value	DF	Prob.
White	Black	-2.124	10	.0597
White	Coloured	-1.876	8	.0975
Black	Coloured	-0.070	6	.9463

The probability value of .0890 > .05 ($\alpha = .05$) indicates there is no statistically significant difference between at least two of the groups. The post-hoc results indicate that there is very little difference between the Black and Coloured groups which is confirmed by their median scores which are both 7. If the α -level is increased to .10 (as is preferred for a small population sample) then there would be a statistically significant difference between the scores of the White population group and both the Black and Coloured population groups.

Level of Place Attachment according to language group

Language group **% MW-PA** **% MS-PA** **% S-PA**

Afrikaans	17 %	17 %	66 %	100 %
English	0 %	50 %	50 %	100 %
Sesotho	0%	0 %	100 %	100 %
Setwana	0 %	34 %	66 %	100 %

Language group representation within sample group

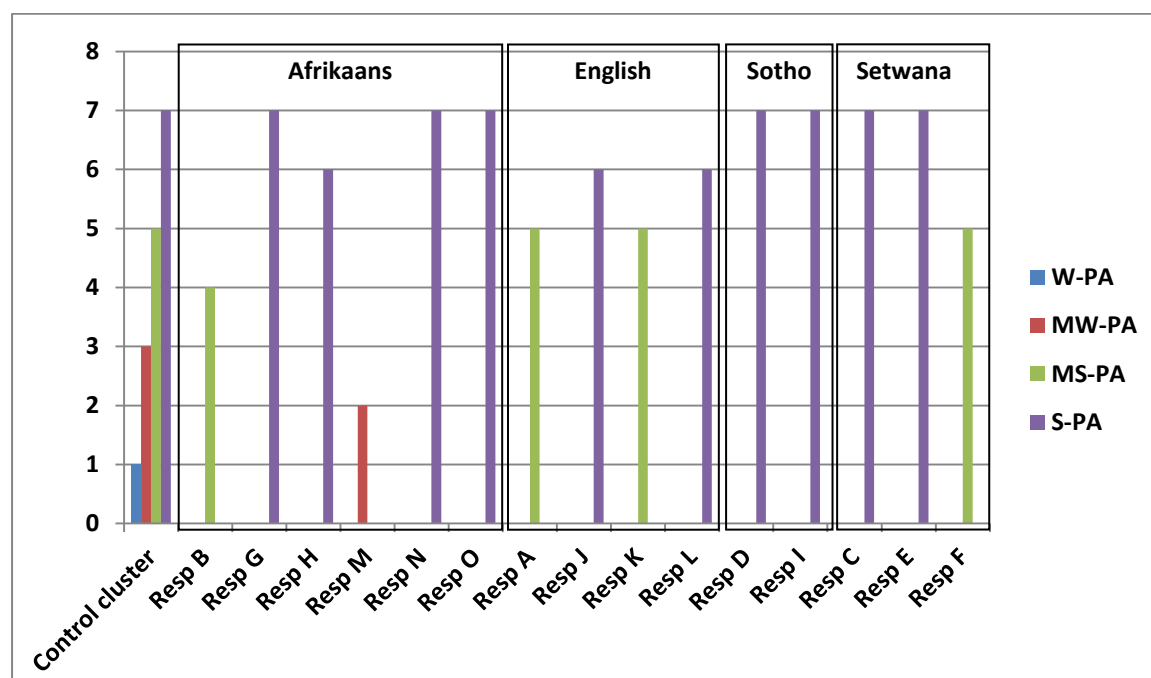
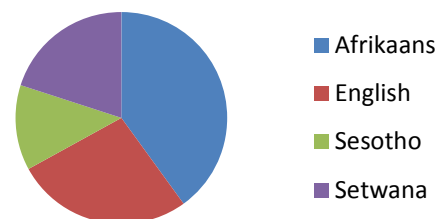


Chart H-6: Level of Place Attachment according to language group

Statistical Summary Report for categories for variable Language Group

<u>Variables</u>	<u>Count</u>	<u>Missing Count</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Standard Error</u>
Afrikaans	6	9	5.5	6.5	2.073644	0.8465617
English	4	11	5.5	5.5	0.5773503	0.2886751
Sesotho	2	13	7	7	0	0
Setwana	3	12	6.333333	7	1.154701	0.6666667

<u>Variables</u>	<u>Sum</u>	<u>Coef of Variation</u>	<u>Coef of Dispersion</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>
Afrikaans	33	0.37703	23.077	2	7	5
English	22	0.10497	9.091	5	6	1
Sesotho	14	0.00000	0.000	7	7	0

Setwana	19	0.18232	9.524	5	7	2
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Variables	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile
Afrikaans	3.5	2	3.5	7	7
English	1	5	5	6	6
Sesotho	0	7	7	7	7
Setwana	2	5	5	7	7

ANOVA test

Source of Variation	Degrees of Freedom (DF)	Sum of Squares	Mean Squares	F-ratio	Probability
Between	3	4.6	1.5	.665	.5906
Within	11	25.2	2.3		
Total	14	29.7			

Post-hoc t tests

Group	Group	t-value	DF	Prob
Afrikaans	English	0.000	8	1.0000
Afrikaans	Sesotho	-1.215	6	.2702
Afrikaans	Setwana	-0.779	7	.4614
English	Sesotho	-1.145	4	.3160
English	Setwana	-0.721	5	.5030
Sesotho	Setwana	0.483	3	.6623

The probability value of .5906 > .05 ($\alpha = .05$) indicates there is no statistically significant difference between the PA-scores of the four language groups.

Level of Place Attachment according to marital status

Marital Status	%MW-PA	%MS-PA	% S-PA	
Single	0 %	100 %	0 %	100 %
Married	0 %	25 %	75 %	100 %
Widowed	17 %	17 %	66 %	100 %

Proportion of marital status within sample group

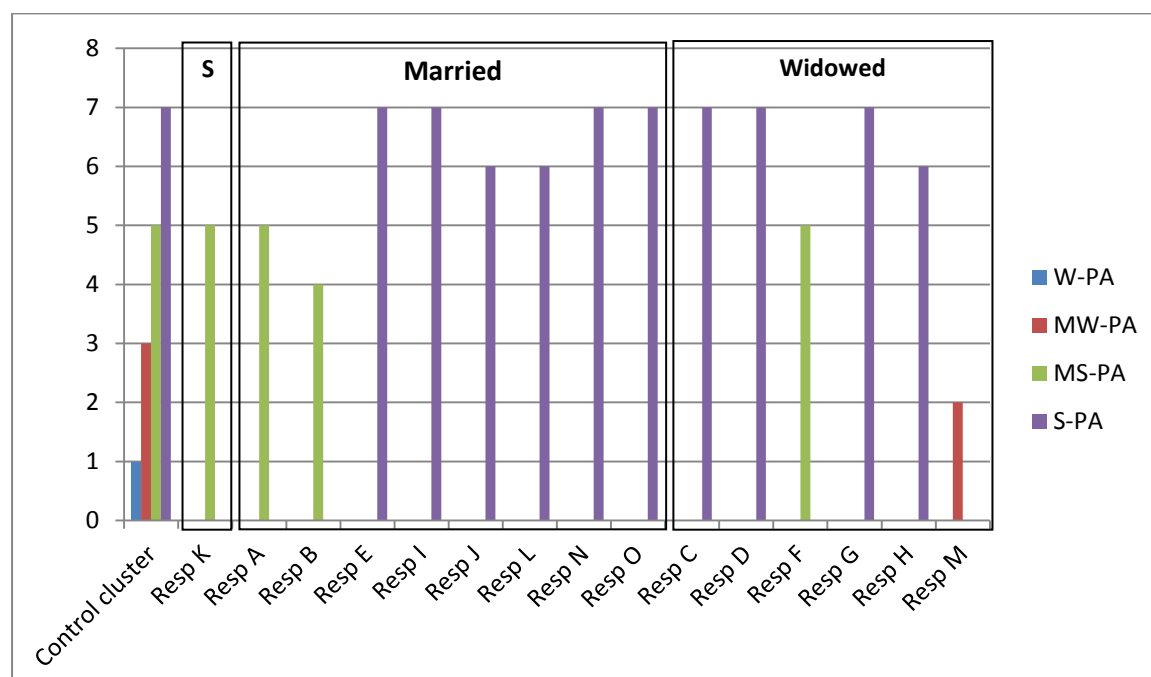
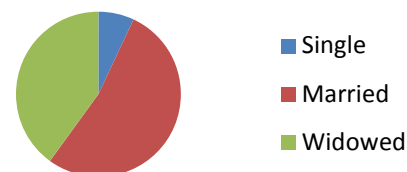


Chart H-7: Level of Place Attachment according to marital status [S=single]

Statistical Summary Report on categories of variable Marital Status

<u>Variables</u>	Count	Missing Count	Mean	Median	Standard Deviation	Standard Error
Single	1	14	5	5		
Married	8	7	6.125	6.5	1.125992	0.3980982
Widowed	6	9	5.666667	6.5	1.966384	0.802773

<u>Variables</u>	Sum	Coef of Variation	Coef of Dispersion	Minimum	Maximum	Range
Single	5	0.00000	0.000	5	5	0
Married	49	0.18384	13.462	4	7	3
Widowed	34	0.34701	20.513	2	7	5

<u>Variables</u>	Interquartile Range	10th Percentile	25th Percentile	75th Percentile	90th Percentile
Single	0	5	5	5	5
Married	1.75	4	5.25	7	7
Widowed	2.75	2	4.25	7	7

ANOVA test

Source of Variation	Degrees of Freedom (DF)	Sum of Squares	Mean Squares	F-ratio	Probability
Between		.7	.7	.306	.5901
Within	12	28.2	2.4		
Total	13	28.9			

Post-hoc t tests

Group	Group	t-value	DF	Prob
Married	Widowed	0.554	12	.5901

The probability value of .5901 > .05 ($\alpha = .05$) indicates there is no statistically significant difference between the PA-scores of the married and widowed groups.

Level of Place Attachment according to employment status

Employment status **%MW-PA** **%MS-PA** **% S-PA**

Unemployed	0 %	0 %	100 %	100 %
Employed	0 %	43 %	57 %	100 %
Retired	17 %	17 %	66 %	100 %

Proportion of employment status within sample group

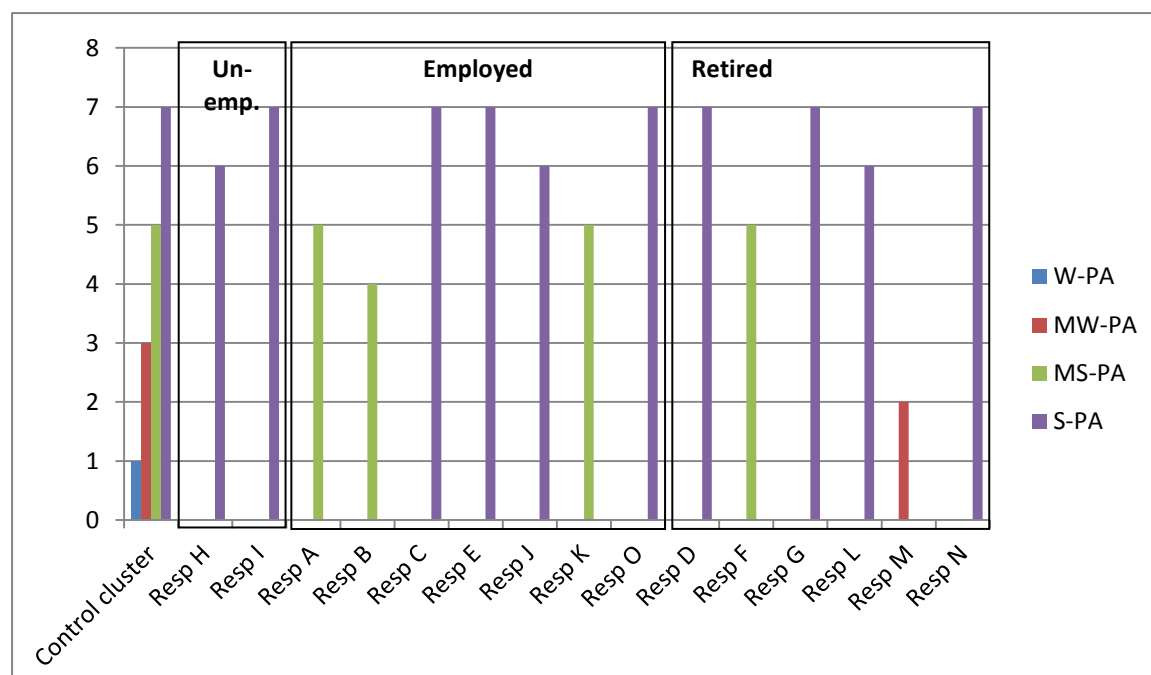
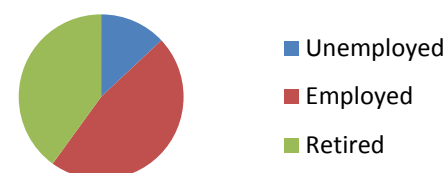


Chart H-8: Level of Place Attachment according to employment status

Statistical Summary Report on categories of variable Employment Status

<u>Variables</u>	<u>Count</u>	<u>Missing Count</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>
Unemployed	2	13	6.5	6.5	0.7071068
Employed	7	8	5.857143	6	1.214986
Retired	6	9	5.666667	6.5	1.966384

<u>Variables</u>	<u>Standard Error</u>	<u>Sum</u>	<u>Coef of Variation</u>	<u>Coef of Dispersion</u>	<u>Minimum</u>
Unemployed	0.5	13	0.10879	7.692	6
Employed	0.4592215	41	0.20744	16.667	4
Retired	0.802773	34	0.34701	20.513	2

<u>Variables</u>	Maximum	Range	Interquartile Range	10th Percentile	25th Percentile
Unemployed	7	1	1	6	6
Employed	7	3	2	4	5
Retired	7	5	2.75	2	4.25

<u>Variables</u>	75th Percentile	90th Percentile
Unemployed	7	7
Employed	7	7
Retired	7	7

ANOVA test

Source of Variation	Degrees of Freedom (DF)	Sum of Squares	Mean Squares	F-ratio	Probability
Between	2	1.0	.5	.218	.8072
Within	12	28.7	2.4		
Total	14	29.7			

Post-hoc *t* tests

Group	Group	t-value	DF	Prob
Unemployed	Employed	0.519	7	.6201
Unemployed	Retired	0.660	6	.5337
Employed	Retired	0.221	11	.8288

The probability value of .8072 > .05 ($\alpha = .05$) indicates there is no statistically significant difference between the PA-scores of the employment status categories.

Level of Place Attachment according to neighbourhood area

Neighbourhood	%MW-PA	%MS-PA	% S-PA	Representation of neighbourhood within sample group
Jagersfontein	11 %	33 %	66 %	100 %
Itumeleng	0 %	33 %	67 %	100 %
Mosenthalville	0 %	0 %	100 %	100 %

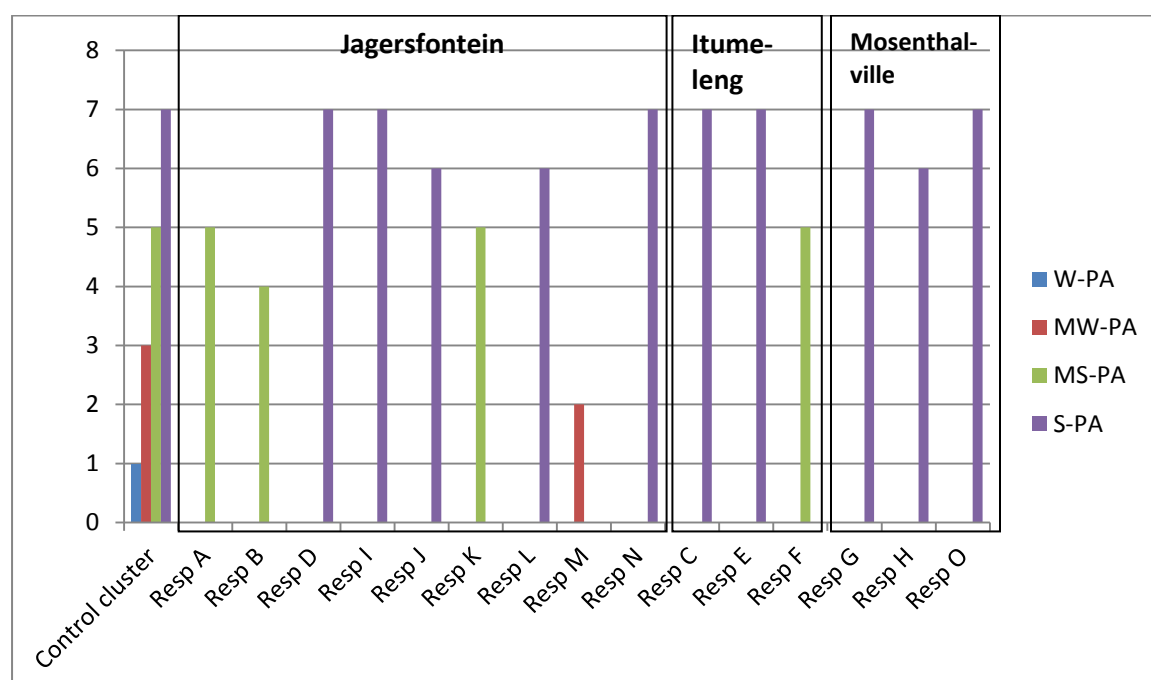
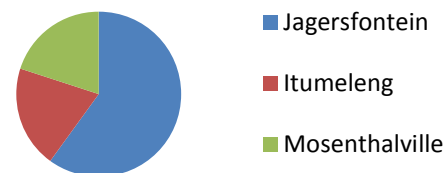


Chart H-9: Level of Place Attachment according to neighbourhood area

Statistical Summary Report on categories of variable Neighbourhood

<u>Variables</u>	Count	Missing Count	Mean	Median	Standard Deviation
Jagersfontein	9	6	5.444445	6	1.666667
Itumeleng	3	12	6.333333	7	1.154701
Mosenthalville	3	12	6.666667	7	0.5773503

<u>Variables</u>	Standard Error	Sum	Coef of Variation	Coef of Dispersion	Minimum
Jagersfontein	0.5555556	49	0.30612	20.370	2
Itumeleng	0.6666667	19	0.18232	9.524	5
Mosenthalville	0.3333333	20	0.08660	4.762	6

<u>Variables</u>	Maximum	Range	Interquartile Range	10th Percentile	25th Percentile
Jagersfontein	7	5	2.5	2	4.5
Itumeleng	7	2	2	5	5
Mosenthalville	7	1	1	6	6

<u>Variables</u>	75th Percentile	90th Percentile
Jagersfontein	7	7
Itumeleng	7	7
Mosenthalville	7	7

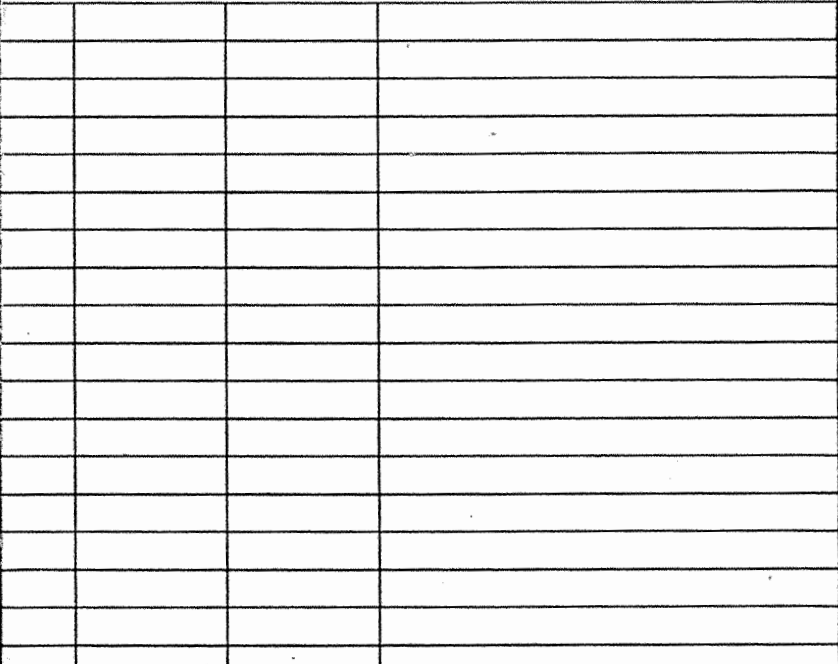
ANOVA test

Source of Variation	Degrees of Freedom (DF)	Sum of Squares	Mean Squares	F-ratio	Probability
Between	2	4.2	2.1	.981	.4031
Within	12	25.6	2.1		
Total	14	29.7			

Post-hoc t tests


Group	Group	t-value	DF	Prob
Jagersfontein	Itumeleng	0.914	10	.3824
Jagersfontein	Mosenthalville	-1.256	10	.2376
Itumeleng	Mosenthalville	-0.280	4	.7935

The probability value of .4031 > .05 ($\alpha = .05$) indicates there is no statistically significant difference between the PA-scores of responses from within the three residential areas.



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SKAAL	SCALE	ONTWERP	DESIGNED
1 : 1500			

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